REVISION OF THE PLANT BUG GENUS *CORIDROMIUS* SIGNORET (INSECTA: HETEROPTERA: MIRIDAE)

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BULLETIN OF THE AMERICAN MUSEUM OF NATURAL HISTORY
CENTRAL PARK WEST AT 79TH STREET, NEW YORK, NY 10024
Number 315, 95 pp., 21 figures, 8 maps, 2 tables
Issued August 29, 2008

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ISSN 0003-0090

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ABSTRACT

The plant bug genus *Coridromius* Signoret is revised. Twenty-one new species from Australia, the South Pacific, Asia and Africa are described (*bicolor*, *boianotum*, *bulbopella*, *chenopoderis*, *confusus*, *crassus*, *drepanopenis*, *ephippius*, *epithema*, *falsicoleus*, *hermosus*, *lestoni*, *marmoreus*, *monotocopsis*, *pilbarensis*, *prolixipenis*, *pteraulos*, *ruwenzorii*, *sommelieri*, *tahitiensis*, and *thalame*). Ten previously described species are redescribed (*schuhi* is excluded, as the type material is presumed lost and Linnavuori's original description and illustrations [Linnavuori, 1994] are not sufficient to distinguish *schuhi* from most other species). The genus *Coridromoides* Carvalho is synonymized with *Coridromius*, and its sole species, *Coridromoides carinatus* Carvalho, 1956, is transferred to *Coridromius*. A key to species, color habitus figures, illustrations of male genitalia, photographs of paragenital dissections, and scanning electron micrographs of structural details are provided. Detailed locality information and distribution maps of all species are included. Host plant data is provided for some species.

INTRODUCTION

Coridromius Signoret (Heteroptera: Miridae: Orthotylinae: Halticini) is an enigmatic plant bug genus readily recognized by its stout body and muscular jumping metafemora, which typically exhibit dark brown diagonal striping on their outer surface (figs. 1–3). This genus is noteworthy because it is the only plant bug known to engage in traumatic insemination, analogous to that found in the Cimicoidea (Tatarnic et al., 2006).

The genus was originally described by Montrouzier (1861) under the name *Ocypus*, for a single species from New Caledonia (*O. variegatus*). Signoret (1862) recognized this as a junior homonym of the coleopteran genus *Ocypus* Leach and proposed *Coridromius* as a replacement name.

Coridromius is found throughout the Old World tropics and subtropics, where 11 species have been described thus far. Aside from the type species, the genus is composed of four species from New Guinea (*minusculus* Carvalho; *neoguineanus* Carvalho; *nigrus* Carvalho, 1987; and *punctatus* Carvalho, 1987), one from Japan (*declivipennis* Miyamoto and Yasunaga, 1999), two from China (*chinensis* Liu and Zhao, 1999, and *testaceous* Liu and Zhao, 1999), two from Laos (*zetteli* Chérot et al., 2004, and *nakatanii* Chérot et al., 2004), and one from the Ivory Coast (*schuhi* Linnavuori 1994: all specimens of this species are presumed lost). An Australian species has also been introduced into Arizona, Hawaii, Texas, Florida, California, New Mexico, and Mexico.

Until recently this genus was considered to be relatively rare in collections (e.g., Schuh, 1974) and very few miridologists had seen specimens. Over the past 25 years an increasing number of specimens have been collected throughout the Old World tropics and subtropics. This has resulted in the description of several new species by various authors (Carvalho, 1987; Linnavuori, 1994; Liu and Zhao, 1999; Miyamoto and Yasunaga, 1999; Chérot et al., 2004), yet there has not been any real attempt to provide a synthesis of the genus.

This project was designed to address this taxonomic impediment and provide a monographic treatment of the genus. Phylogenetic and biogeographic analyses will be published separately. This work, the result of a larger effort aimed at documenting the mirid subfamilies Orthotylinae and Phylinae on a global basis, is part of the U.S. National Science Foundation–funded project, the Planetary Biodiversity Inventory (PBI).

MATERIALS AND METHODS

Specimens

This study is based on specimens from existing museum collections as well as new material collected during the PBI fieldwork program. We have collected specimens of *variegatus* from New Caledonia; *chinensis*, *testaceous*, and *zetteli* from southern China and Laos; and *chenopoderis*, *monotocopsis*, and *pilbarensis* from across Australia, in part supported by our colleagues Randall T. Schuh from the American Museum of Natural History, Christiane Weirauch from

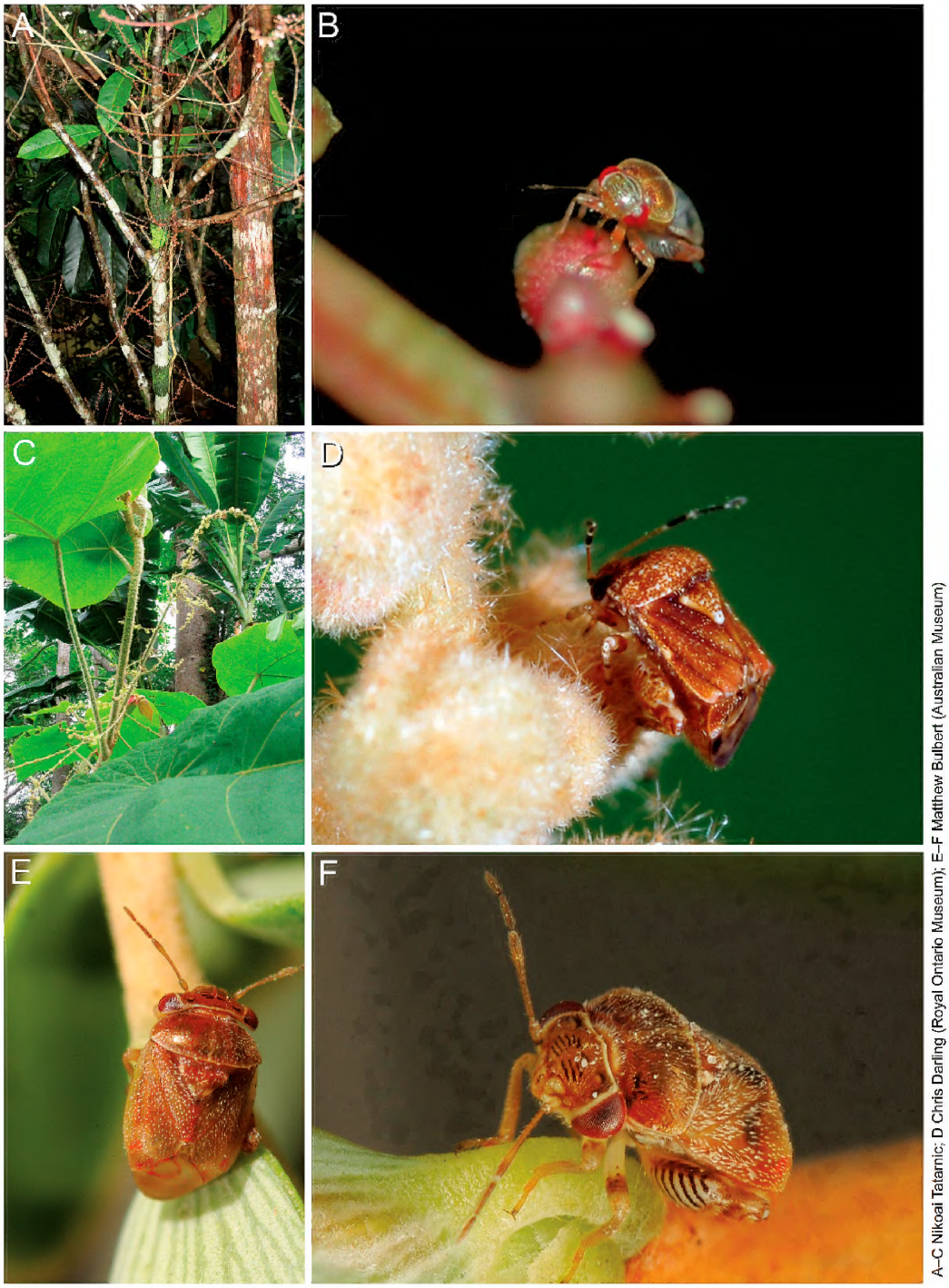


Fig. 1. **A.** An unidentified species of *Phyllanthus* (Euphorbiaceae), a host plant of *C. variegatus* in New Caledonia. **B.** Adult *C. variegatus* on *Phyllanthus* bud. **C.** An unidentified species of *Macaranga* (Euphorbiaceae) in southern China, from which *C. chinensis*, *testaceous*, and *zetteli* were collected. **D.** Close-up of *C. chinensis* on *Macaranga* flowers. **E–F.** *C. monotocopsis* on *Monotoca elliptica* (Epacridaceae) in Sydney, Australia.

Fig. 2. **A.** *Rhagodia preissi* (Chenopodiaceae), one of many host plants of *C. chenopoderis*. **B.** Dark and light morphs of *C. chenopoderis* on *R. preissi*. **C.** *C. chenopoderis* on *R. preissi* flower. **D.** *C. testaceous*.

the University of California, Riverside, Celia Symonds from the Australian Museum, and Michael Wall from the San Diego Museum of Natural History. Michael Schwartz from Agriculture and Agri-food Canada, Thomas Henry from the National Museum of Natural History, and Alfred Wheeler from Clemson University have also collected numerous specimens of *chenopoderis* from southern North America, while Dan Polhemus from the Hawaii Department of Land and Natural Resources has collected this same species in

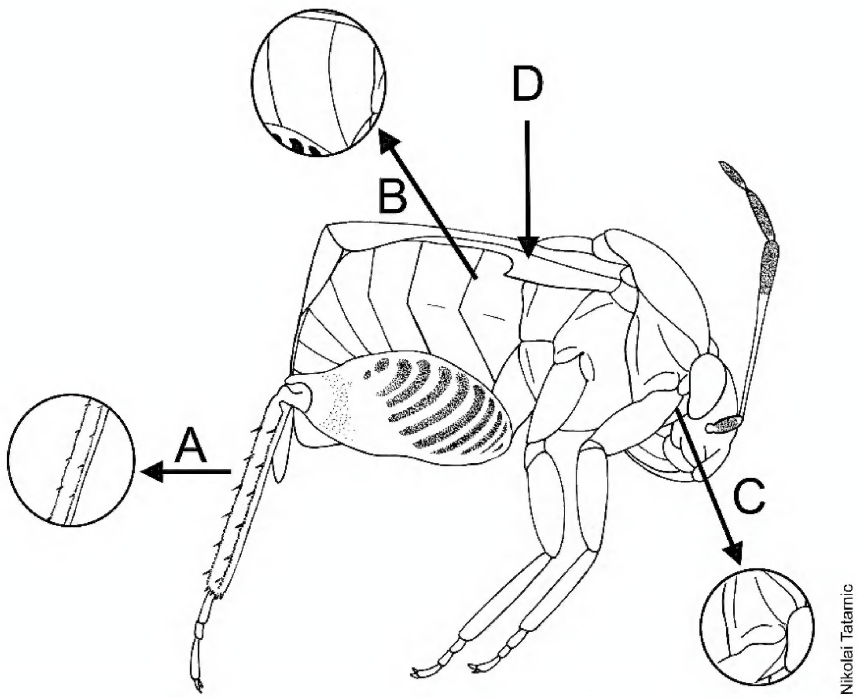


Fig. 3. Illustration of female *C. pteraulos*, with insets indicating some alternate character states as found in other species: **A.** Metatibial spines may be either long and thick, as in *pteraulos*, or short and thin. **B.** The posterior margin of abdominal sternite II may be distinctly angular or relatively straight. **C.** The proepisternum may be either bilobed or unilobed. **D.** The modified lateral margin of the hemelytron, unique to *pteraulos* females.

Hawaii. Host plant records were obtained from many of these collecting events.

All specimens examined over the course of this project have been labeled with matrix code labels, giving each specimen a "unique specimen identifier" (USI). USI codes all begin with the PBI project code "AMNH_PBI" followed by a unique eight-digit number (e.g., "AMNH_PBI 00018973" is the USI for the holotype of *C. variegatus*). In a few cases, where species are represented by a large series of specimens, not all individuals were provided with USI codes; only specimens with USI codes are referred to in this work. USI codes are found in the lists of examined specimens, which also include all available collecting data as provided on labels, including host plant identification and georeference data whenever available. When coordinates were not originally provided, this information was obtained from gazetteers, atlases and other sources. These georeferencing data were used to generate all the distribution maps included herein. Additional information on specimens and on the PBI project can be found on the PBI website (http://research.amnh.org/pbi).

Acronyms for the institutions from which we examined specimens are as follows:

AM	Australian Museum, Sydney
AMNH	American Museum of Natural History, New York
ANIC	Australian National Insect Collection, CSIRO, Canberra
BMNH	Natural History Museum, London
BPBM	Bishop Museum, Honolulu
CNC	Canadian National Collection of Insects, Agriculture and Agri-Food Canada, Ottawa
NHMW	Naturhistorisches Museum, Vienna
NKUM	Nankai University, Tianjin
QM	Queensland Museum, Brisbane
SAMA	South Australian Museum, Adelaide

SANC	Plant Protection Research Institute, Pretoria
TAMU	Texas A&M University, Department of Entomology, College Station
TYCN	Tomohide Yasunaga Collection, Nagasaki
ULB	Université Libre de Bruxelles, Brussels
USNM	United States National Museum of Natural History, Smithsonian Institution, Washington
ZMUC	Danish Natural History Museum, Copenhagen

Homology and Terminology

Terminology for modifications of the male pygophore has been adopted from Miyamoto and Yasunaga (1999). Every attempt was made to dissect and illustrate each species using pen and ink drawings, photographs, and scanning electron micrographs (SEMs). For some species examinations were limited due to a paucity of specimens. Male genitalia were imaged in situ using SEM and were illustrated from dissections. In all species of *Coridromius* the aedeagus is reduced to a simple tube, which is routed through a gutter in the left paramere (see fig. 17A); thus, it is the shape of the paramere—not that of the aedeagus—that is of greater taxonomic importance. For this reason only the parameres are illustrated. Since *Coridromius* mate via traumatic insemination, the female genitalia are nonfunctional during mating and are therefore considerably reduced, with the posterior wall entirely membranous and the seminal depository reduced or absent (fig. 20A). These structures are not taxonomically informative and are not treated in this review. In contrast, the female external paragenitalia are variable between species and are described here in detail for the first time.

Measurements

All measurements are maximum lengths in millimeters. Measurements include: clypeus to cuneus length, head length and width, pronotal length and width, scutellar length and width, cuneus length, interocular distance, and the lengths of antennal segments I through IV. Because the hemelytra in *Coridromius* are strongly declivent caudal to the cuneal fracture, the total body length is inferred from measuring from the clypeus to the cuneal fracture, rather than to the end of the wing membrane. All measurements are shown in table 1.

SYSTEMATIC PLACEMENT

Owing to its unusual, compact body shape and unique genitalia, the tribal placement of *Coridromius* has proven problematic. Schuh (1974) initially placed *Coridromius* within the tribe Orthotylini, while acknowledging its similarity to the Hawaiian genus *Nesidiorchestes* Kirkaldy, the latter placed in the Halticini by Carvalho (1952). Schuh suggested that the genitalia of these two genera needed comparison to determine whether they are in fact closely related and to determine their tribal placement. He noted that although the Halticini are sometimes difficult to distinguish from the Orthotylini on external characters alone, the lack of interramal lobes on the posterior wall of the female genitalia always distinguishes the Halticini (Schuh, 1974). The placement of *Coridromius* in the Orthotylini persisted, with Linnavuori (1994) noting that it differed significantly from other Orthotylini by its small, compact body, *Halticus*-like legs and unique male genitalia, features that suggest the genus may require its own tribe. He thought *Coridromius* to be related to *Coridromoides* and perhaps also *Nesidiorchestes*, both of which belonged to the Halticini.

After examining the female genitalia, Cassis and Gross (1995) and Schuh (1995) placed *Coridromius* within the Halticini. While they did not explicitly justify their taxonomic placement, there are nonetheless several characters to support this decision: the tarsal claws lack pulvilli, the aedeagus is small with the vesica membranous and lacking spiculi, and most telling of all, the posterior wall lacks interramal lobes.

In light of what we now know of the mating biology of *Coridromius* (discussed below), any inferences of the homology of genitalic structures should be made with

TABLE 1
Measurements of *Coridromius* species

Species		Length					Width							
		Clyp-Cun	Head	Pronotum	Scutellum	Cuneus	Head	Pronotum	Scutellum	InterOcDist	AI	AII	AIII	AIV
bicolor														
M	**Mean**	**1.78**	**0.13**	**0.60**	**0.38**	**0.45**	**0.99**	**1.31**	**0.58**	**0.59**	**0.17**	**1.04**	**0.32**	**0.19**
	SD	0.12	0.03	0.03	0.07	0.03	0.04	0.03	0.02	0.04	0.02	0.06	0.01	0.05
	Range	0.27	0.07	0.08	0.17	0.08	0.11	0.08	0.06	0.11	0.04	0.15	0.02	0.13
	Min	1.64	0.09	0.56	0.29	0.42	0.92	1.27	0.55	0.54	0.15	0.95	0.31	0.13
	Max	1.91	0.16	0.65	0.46	0.50	1.03	1.34	0.61	0.65	0.19	1.10	0.33	0.26
	Count	5	5	5	5	5	5	5	5	5	5	5	4	4
F	**Mean**	**1.86**	**0.12**	**0.63**	**0.44**	**0.46**	**1.01**	**1.36**	**0.61**	**0.62**	**0.20**	**1.08**	**0.28**	**0.20**
	SD	0.09	0.00	0.00	0.07	0.01	0.03	0.09	0.04	0.03	0.01	0.03	0.01	0.01
	Range	0.13	0.00	0.00	0.10	0.01	0.04	0.13	0.06	0.04	0.02	0.04	0.01	0.01
	Min	1.80	0.12	0.63	0.39	0.46	0.99	1.30	0.58	0.60	0.19	1.06	0.28	0.20
	Max	1.93	0.12	0.63	0.49	0.47	1.03	1.43	0.64	0.64	0.21	1.10	0.29	0.21
	Count	2	2	2	2	2	2	2	2	2	2	2	2	2
boianotum														
M	**Mean**	**1.81**	**0.13**	**0.62**	**0.38**	**0.48**	**0.96**	**1.32**	**0.58**	**0.60**	**0.17**	**0.95**	**0.31**	**0.18**
	SD	0.06	0.03	0.02	0.04	0.02	0.02	0.04	0.03	0.03	0.01	0.05	0.06	0.02
	Range	0.16	0.07	0.05	0.10	0.06	0.05	0.12	0.06	0.08	0.02	0.13	0.13	0.03
	Min	1.73	0.09	0.59	0.33	0.44	0.94	1.26	0.55	0.58	0.16	0.91	0.24	0.16
	Max	1.89	0.16	0.64	0.43	0.51	0.99	1.37	0.61	0.66	0.18	1.03	0.37	0.19
	Count	5	5	5	5	5	5	5	5	5	5	5	3	3
F	**Mean**	**1.85**	**0.15**	**0.56**	**0.41**	**0.51**	**0.97**	**1.32**	**0.61**	**0.60**	**0.18**	**0.97**	**0.35**	**0.20**
	SD	0.19	0.08	0.09	0.02	0.06	0.03	0.09	0.05	0.04	0.01	0.05	0.02	0.04
	Range	0.52	0.20	0.21	0.04	0.16	0.08	0.19	0.12	0.12	0.03	0.12	0.04	0.07
	Min	1.62	0.09	0.49	0.39	0.42	0.94	1.23	0.58	0.54	0.16	0.89	0.33	0.17
	Max	2.14	0.28	0.70	0.43	0.58	1.01	1.42	0.69	0.66	0.19	1.01	0.36	0.24
	Count	5	5	5	5	5	5	5	5	5	5	5	3	3
bulbopella														
M	**Mean**	**1.79**	**0.14**	**0.54**	**0.39**	**0.33**	**0.77**	**1.22**	**0.56**	**0.49**	**0.16**	**0.88**	**0.28**	**0.18**
	SD	0.02	0.01	0.04	0.02	0.00	0.04	0.09	0.00	0.02	0.00	0.02	0.02	0.00
	Range	0.04	0.01	0.06	0.03	0.00	0.06	0.13	0.00	0.03	0.00	0.03	0.02	0.00
	Min	1.78	0.14	0.51	0.38	0.33	0.74	1.16	0.56	0.48	0.16	0.86	0.27	0.18
	Max	1.81	0.15	0.57	0.40	0.33	0.80	1.28	0.56	0.51	0.16	0.89	0.29	0.18
	Count	2	2	2	2	2	2	2	2	2	2	2	2	2

TABLE 1
(*Continued*)

Species		Length					Width							
		Clyp-Cun	Head	Pronotum	Scutellum	Cuneus	Head	Pronotum	Scutellum	InterOcDist	AI	AII	AIII	AIV
F	**Mean**	**1.87**	**0.11**	**0.48**	**0.42**	**0.37**	**0.80**	**1.28**	**0.59**	**0.53**	**0.16**	**0.87**		
	SD	0.04	0.01	0.08	0.02	0.02	0.02	0.06	0.00	0.02	0.02	0.01		
	Range	0.06	0.02	0.11	0.02	0.03	0.02	0.08	0.01	0.02	0.03	0.02		
	Min	1.83	0.10	0.42	0.41	0.36	0.79	1.23	0.59	0.52	0.15	0.86		
	Max	1.90	0.12	0.54	0.43	0.39	0.81	1.32	0.59	0.54	0.17	0.88		
	Count	2	2	2	2	2	2	2	2	2	2	2		
carinatus														
M	**Mean**	**1.24**	**0.11**	**0.47**	**0.26**	**0.47**	**0.84**	**0.93**	**0.42**	**0.57**	**0.16**	**0.87**	**0.29**	**0.22**
	Count	1	1	1	1	1	1	1	1	1	1	1	1	1
chenopoderis														
M	**Mean**	**1.52**	**0.14**	**0.46**	**0.32**	**0.36**	**0.90**	**1.01**	**0.45**	**0.54**	**0.13**	**0.68**	**0.26**	**0.17**
	SD	0.10	0.02	0.04	0.03	0.03	0.04	0.08	0.03	0.03	0.02	0.04	0.01	0.02
	Range	0.20	0.05	0.09	0.08	0.08	0.11	0.21	0.08	0.08	0.04	0.09	0.03	0.04
	Min	1.40	0.12	0.43	0.28	0.32	0.84	0.90	0.42	0.49	0.12	0.62	0.24	0.15
	Max	1.60	0.17	0.52	0.35	0.39	0.95	1.11	0.50	0.57	0.15	0.72	0.28	0.19
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5
F	**Mean**	**1.65**	**0.13**	**0.51**	**0.36**	**0.39**	**0.93**	**1.11**	**0.50**	**0.58**	**0.14**	**0.67**	**0.26**	**0.16**
	SD	0.23	0.03	0.07	0.06	0.08	0.10	0.15	0.06	0.06	0.03	0.11	0.03	0.03
	Range	0.62	0.08	0.16	0.16	0.21	0.25	0.33	0.14	0.16	0.07	0.28	0.07	0.06
	Min	1.34	0.10	0.44	0.27	0.29	0.81	0.94	0.43	0.50	0.10	0.53	0.22	0.13
	Max	1.95	0.18	0.59	0.42	0.50	1.05	1.27	0.57	0.66	0.17	0.81	0.30	0.19
	Count	5	5	5	5	5	5	5	5	5	5	5	5	4
chinensis														
M	**Mean**	**1.73**	**0.12**	**0.61**	**0.43**	**0.42**	**0.79**	**1.30**	**0.59**	**0.47**	**0.16**	**0.86**	**0.35**	**0.21**
	SD	0.05	0.01	0.06	0.01	0.02	0.05	0.05	0.03	0.02	0.02	0.07	0.03	0.02
	Range	0.14	0.04	0.16	0.04	0.05	0.13	0.13	0.06	0.04	0.05	0.19	0.07	0.03
	Min	1.67	0.11	0.51	0.41	0.40	0.74	1.23	0.56	0.44	0.14	0.79	0.33	0.19
	Max	1.81	0.14	0.67	0.45	0.45	0.87	1.36	0.62	0.48	0.19	0.98	0.40	0.22
	Count	5	5	5	5	5	5	5	5	5	5	5	5	4
F	**Mean**	**1.90**	**0.12**	**0.66**	**0.47**	**0.47**	**0.83**	**1.41**	**0.66**	**0.51**	**0.16**	**0.86**	**0.32**	**0.21**
	SD	0.09	0.02	0.04	0.07	0.03	0.03	0.04	0.05	0.02	0.02	0.04	0.02	0.05
	Range	0.21	0.06	0.11	0.18	0.06	0.06	0.11	0.14	0.04	0.04	0.10	0.05	0.09
	Min	1.81	0.09	0.59	0.38	0.44	0.80	1.34	0.61	0.49	0.14	0.81	0.29	0.16
	Max	2.03	0.15	0.71	0.56	0.50	0.86	1.46	0.74	0.54	0.19	0.91	0.35	0.24
	Count	5	5	5	5	5	5	5	5	5	5	5	4	3

TABLE 1
(*Continued*)

Species		Length					Width							
		Clyp-Cun	Head	Pronotum	Scutellum	Cuneus	Head	Pronotum	Scutellum	InterOcDist	AI	AII	AIII	AIV
confusus														
M	**Mean**	**1.95**	**0.13**	**0.73**	**0.47**	**0.42**	**0.89**	**1.48**	**0.69**	**0.51**	**0.19**	**1.05**	**0.33**	**0.23**
	SD	0.07	0.03	0.03	0.02	0.03	0.01	0.03	0.04	0.01	0.02	0.02	0.02	0.02
	Range	0.20	0.07	0.08	0.04	0.07	0.04	0.08	0.08	0.02	0.04	0.05	0.04	0.05
	Min	1.87	0.10	0.68	0.45	0.37	0.87	1.45	0.64	0.49	0.17	1.02	0.31	0.19
	Max	2.06	0.17	0.76	0.49	0.44	0.90	1.53	0.72	0.52	0.21	1.08	0.35	0.25
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5
F	**Mean**	**2.14**	**0.13**	**0.83**	**0.51**	**0.47**	**0.92**	**1.63**	**0.74**	**0.56**	**0.17**	**1.04**	**0.38**	**0.23**
	SD	0.28	0.01	0.12	0.07	0.05	0.07	0.18	0.08	0.05	0.01	0.08	0.03	0.02
	Range	0.69	0.03	0.29	0.17	0.15	0.17	0.47	0.20	0.14	0.03	0.21	0.09	0.06
	Min	1.93	0.12	0.72	0.45	0.40	0.87	1.45	0.67	0.51	0.15	0.96	0.34	0.21
	Max	2.62	0.15	1.01	0.62	0.55	1.04	1.92	0.87	0.65	0.19	1.17	0.44	0.27
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5
crassus														
M	**Mean**	**2.01**	**0.19**	**0.65**	**0.50**	**0.42**	**0.88**	**1.44**	**0.68**	**0.53**	**0.14**	**1.00**	**0.28**	**0.21**
	SD	0.18	0.01	0.08	0.07	0.04	0.02	0.09	0.04	0.02	0.00	0.27		
	Range	0.35	0.02	0.15	0.13	0.08	0.03	0.16	0.08	0.03	0.00	0.38		
	Min	1.85	0.18	0.60	0.45	0.39	0.86	1.38	0.64	0.52	0.14	0.82		
	Max	2.20	0.20	0.74	0.58	0.47	0.89	1.55	0.72	0.55	0.14	1.19		
	Count	3	3	3	3	3	3	3	3	3	2	2	1	1
declivipennis														
M	**Mean**	**2.04**	**0.15**	**0.59**	**0.50**	**0.39**	**0.87**	**1.30**	**0.66**	**0.55**	**0.15**	**0.92**	**0.28**	**0.11**
	SD	0.07	0.04	0.04	0.04	0.04	0.06	0.15	0.03	0.02	0.01	0.07	0.03	0.12
	Range	0.14	0.10	0.10	0.11	0.09	0.14	0.32	0.07	0.05	0.02	0.17	0.04	0.23
	Min	1.98	0.11	0.55	0.45	0.35	0.78	1.08	0.61	0.53	0.14	0.83	0.26	0.00
	Max	2.12	0.21	0.64	0.55	0.45	0.92	1.40	0.68	0.57	0.16	0.99	0.29	0.23
	Count	4	4	4	4	4	4	4	4	4	4	4	2	2
F	**Mean**	**2.05**	**0.17**	**0.61**	**0.48**	**0.37**	**0.95**	**1.41**	**0.68**	**0.57**	**0.14**	**0.84**	**0.26**	**0.18**
	SD	0.05	0.01	0.02	0.03	0.05	0.12	0.05	0.03	0.01	0.01	0.04	0.03	0.05
	Range	0.12	0.03	0.06	0.08	0.11	0.29	0.11	0.07	0.02	0.03	0.09	0.08	0.12
	Min	2.01	0.15	0.57	0.45	0.31	0.87	1.35	0.65	0.55	0.12	0.78	0.23	0.11
	Max	2.13	0.18	0.63	0.53	0.43	1.16	1.46	0.72	0.58	0.16	0.88	0.31	0.23
	Count	5	5	5	5	5	5	5	5	5	4	4	4	4

TABLE 1
(*Continued*)

Species		Length					Width							
		Clyp-Cun	Head	Pronotum	Scutellum	Cuneus	Head	Pronotum	Scutellum	InterOcDist	AI	AII	AIII	AIV
drepanopenis														
M	**Mean**	**2.48**	**0.19**	**0.76**	**0.61**	**0.60**	**1.20**	**1.74**	**0.89**	**0.74**	**0.20**	**1.22**	**0.38**	**0.23**
	Count	1	1	1	1	1	1	1	1	1	1	1	1	1
ephippius														
M	**Mean**	**2.01**	**0.15**	**0.62**	**0.47**	**0.48**	**1.05**	**1.34**	**0.57**	**0.68**	**0.15**	**1.05**	**0.35**	**0.25**
	SD	0.06	0.03	0.06	0.02	0.05	0.01	0.14	0.29	0.12	0.08	0.03	0.02	0.08
	Range	0.13	0.08	0.13	0.05	0.12	0.02	0.34	0.69	0.27	0.20	0.08	0.03	0.15
	Min	1.92	0.10	0.56	0.46	0.41	1.05	1.09	0.06	0.61	0.00	1.01	0.33	0.20
	Max	2.05	0.18	0.69	0.50	0.54	1.06	1.43	0.75	0.88	0.20	1.09	0.36	0.35
	Count	5	5	5	5	5	5	5	5	5	4	4	3	3
F	**Mean**	**2.24**	**0.16**	**0.61**	**0.50**	**0.50**	**1.06**	**1.46**	**0.80**	**0.64**	**0.19**	**0.97**	**0.34**	**0.22**
	SD	0.28	0.02	0.04	0.04	0.06	0.08	0.13	0.13	0.05	0.01	0.03	0.06	0.01
	Range	0.67	0.05	0.10	0.09	0.12	0.16	0.28	0.31	0.12	0.03	0.08	0.10	0.02
	Min	1.87	0.13	0.55	0.44	0.45	0.95	1.27	0.62	0.57	0.18	0.92	0.28	0.20
	Max	2.55	0.18	0.64	0.53	0.57	1.11	1.55	0.93	0.69	0.21	1.00	0.38	0.22
	Count	4	4	4	4	4	4	4	4	4	4	4	3	3
epithema														
F	**Mean**	**2.19**	**0.15**	**0.58**	**0.53**	**0.61**	**1.09**	**1.52**	**0.79**	**0.68**	**0.15**	**0.89**		
	Count	1	1	1	1	1	1	1	1	1	1	1		
falsicoleus														
F	**Mean**	**2.08**	**0.14**	**0.60**	**0.52**	**0.45**	**0.88**	**1.40**	**0.69**	**0.53**	**0.17**	**0.89**	**0.35**	
	SD	0.09	0.04	0.08	0.02	0.04	0.03	0.05	0.01	0.01	0.02	0.04		
	Range	0.21	0.09	0.17	0.04	0.08	0.06	0.11	0.03	0.03	0.03	0.08		
	Min	1.97	0.10	0.49	0.50	0.39	0.85	1.33	0.67	0.51	0.15	0.86		
	Max	2.17	0.19	0.66	0.54	0.48	0.91	1.44	0.70	0.54	0.18	0.94		
	Count	4	4	4	4	4	4	4	4	4	4	3	1	
hermosus														
M	**Mean**	**2.40**	**0.11**	**0.63**	**0.60**	**0.64**	**1.17**	**1.65**	**0.81**	**0.67**	**0.21**	**1.11**	**0.34**	**0.20**
	SD	0.09	0.02	0.07	0.04	0.07	0.03	0.07	0.07	0.04	0.04	0.10	0.01	0.02
	Range	0.20	0.05	0.16	0.08	0.15	0.07	0.17	0.18	0.09	0.08	0.22	0.03	0.05
	Min	2.27	0.08	0.55	0.55	0.58	1.14	1.56	0.73	0.61	0.16	1.03	0.32	0.18
	Max	2.47	0.13	0.72	0.63	0.74	1.20	1.72	0.91	0.70	0.24	1.25	0.35	0.23
	Count	4	4	4	4	4	4	4	4	4	4	4	4	4

TABLE 1
(*Continued*)

Species		Length					Width							
		Clyp-Cun	Head	Pronotum	Scutellum	Cuneus	Head	Pronotum	Scutellum	InterOcDist	AI	AII	AIII	AIV
F	**Mean**	**2.66**	**0.14**	**0.69**	**0.65**	**0.70**	**1.22**	**1.79**	**0.90**	**0.78**	**0.22**	**1.15**	**0.31**	**0.24**
	SD	0.13	0.00	0.03	0.01	0.02	0.03	0.04	0.04	0.02	0.01	0.03	0.05	0.01
	Range	0.22	0.00	0.06	0.02	0.03	0.06	0.07	0.08	0.04	0.01	0.06	0.10	0.02
	Min	2.52	0.14	0.66	0.64	0.68	1.19	1.75	0.85	0.76	0.21	1.12	0.26	0.23
	Max	2.74	0.14	0.72	0.66	0.71	1.25	1.82	0.93	0.80	0.23	1.18	0.37	0.24
	Count	3	3	3	3	3	3	3	3	3	3	3	3	3
lestoni														
M	**Mean**	**1.31**	**0.08**	**0.40**	**0.28**	**0.26**	**0.63**	**0.90**	**0.42**	**0.38**	**0.11**	**0.51**		
	Count	1	1	1	1	1	1	1	1	1	1	1		
F	**Mean**	**1.27**	**0.11**	**0.35**	**0.29**	**0.25**	**0.62**	**0.98**	**0.43**	**0.36**	**0.11**	**0.47**		
	Count	1	1	1	1	1	1	1	1	1	1	1		
marmoreus														
M	**Mean**	**2.04**	**0.14**	**0.67**	**0.49**	**0.52**	**0.96**	**1.56**	**0.60**	**0.59**	**0.18**	**0.97**	**0.34**	**0.23**
	SD	0.41	0.04	0.04	0.02	0.17	0.05	0.11	0.28	0.10	0.03	0.09	0.05	0.04
	Range	0.97	0.11	0.10	0.04	0.42	0.11	0.29	0.67	0.24	0.06	0.21	0.11	0.08
	Min	1.33	0.08	0.61	0.47	0.40	0.90	1.45	0.11	0.53	0.16	0.85	0.29	0.20
	Max	2.30	0.19	0.71	0.51	0.82	1.01	1.74	0.78	0.78	0.22	1.06	0.40	0.28
	Count	5	5	5	5	5	5	5	5	5	4	4	4	4
F	**Mean**	**2.19**	**0.13**	**0.65**	**0.53**	**0.46**	**0.95**	**1.53**	**0.76**	**0.58**	**0.16**	**0.99**	**0.39**	**0.22**
	SD	0.14	0.02	0.05	0.02	0.04	0.03	0.08	0.08	0.03	0.01	0.04	0.05	0.02
	Range	0.34	0.04	0.14	0.05	0.10	0.07	0.19	0.21	0.07	0.02	0.09	0.11	0.04
	Min	1.95	0.11	0.57	0.50	0.42	0.90	1.40	0.63	0.54	0.15	0.94	0.32	0.20
	Max	2.29	0.15	0.71	0.55	0.51	0.97	1.59	0.84	0.61	0.17	1.03	0.43	0.23
	Count	5	5	5	5	5	5	5	5	5	4	4	4	4
minusculus														
M	**Mean**	**1.52**	**0.09**	**0.54**	**0.36**	**0.38**	**0.69**	**1.12**	**0.49**	**0.43**	**0.16**	**0.82**	**0.25**	**0.19**
	SD	0.08	0.01	0.05	0.00	0.01	0.06	0.12	0.06	0.03	0.01	0.02		
	Range	0.11	0.01	0.07	0.00	0.02	0.08	0.17	0.08	0.05	0.01	0.02		
	Min	1.46	0.09	0.51	0.36	0.37	0.65	1.04	0.45	0.40	0.15	0.81		
	Max	1.57	0.10	0.57	0.36	0.39	0.74	1.21	0.53	0.45	0.16	0.83		
	Count	2	2	2	2	2	2	2	2	2	2	2	1	1

TABLE 1
(*Continued*)

Species		Length					Width							
		Clyp-Cun	Head	Pronotum	Scutellum	Cuneus	Head	Pronotum	Scutellum	InterOcDist	AI	AII	AIII	AIV
monotocopsis														
M	**Mean**	**1.71**	**0.12**	**0.52**	**0.40**	**0.38**	**1.09**	**1.30**	**0.59**	**0.69**	**0.14**	**0.65**	**0.25**	**0.17**
	SD	0.10	0.01	0.02	0.04	0.03	0.03	0.05	0.04	0.03	0.01	0.05	0.01	0.03
	Range	0.26	0.02	0.06	0.11	0.08	0.06	0.13	0.10	0.09	0.02	0.14	0.04	0.07
	Min	1.56	0.11	0.50	0.33	0.33	1.06	1.23	0.55	0.65	0.13	0.58	0.23	0.13
	Max	1.82	0.13	0.56	0.45	0.41	1.12	1.35	0.65	0.74	0.15	0.71	0.27	0.20
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5
F	**Mean**	**1.93**	**0.17**	**0.61**	**0.42**	**0.40**	**1.15**	**1.41**	**0.65**	**0.73**	**0.16**	**0.67**	**0.25**	**0.18**
	SD	0.11	0.02	0.03	0.04	0.02	0.06	0.09	0.05	0.04	0.01	0.06	0.01	0.02
	Range	0.30	0.03	0.07	0.11	0.06	0.14	0.23	0.14	0.09	0.03	0.14	0.02	0.06
	Min	1.75	0.15	0.57	0.35	0.37	1.07	1.26	0.57	0.67	0.14	0.61	0.24	0.16
	Max	2.04	0.19	0.64	0.46	0.42	1.21	1.49	0.71	0.76	0.17	0.76	0.26	0.22
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5
nakatanii														
M	**Mean**	**2.07**	**0.15**	**0.63**	**0.50**	**0.43**	**0.86**	**1.32**	**0.66**	**0.51**	**0.18**	**1.00**	**0.34**	**0.26**
	SD	0.03	0.02	0.03	0.02	0.03	0.02	0.03	0.02	0.02	0.02	0.06	0.01	0.01
	Range	0.08	0.04	0.06	0.06	0.07	0.04	0.06	0.06	0.05	0.05	0.14	0.02	0.04
	Min	2.03	0.13	0.60	0.47	0.39	0.84	1.29	0.62	0.49	0.16	0.93	0.33	0.23
	Max	2.11	0.18	0.66	0.53	0.46	0.88	1.36	0.69	0.54	0.20	1.07	0.35	0.27
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5
F	**Mean**	**2.03**	**0.09**	**0.61**	**0.50**	**0.45**	**0.85**	**1.36**	**0.69**	**0.54**	**0.17**	**0.91**	**0.28**	**0.23**
	Count	1	1	1	1	1	1	1	1	1	1	1	1	1
neoguineanus														
M	**Mean**	**1.69**	**0.13**	**0.52**	**0.37**	**0.39**	**0.81**	**1.17**	**0.53**	**0.54**	**0.14**	**0.83**	**0.28**	**0.18**
	SD	0.05	0.02	0.03	0.03	0.02	0.02	0.04	0.02	0.01	0.00	0.02	0.01	0.01
	Range	0.13	0.04	0.06	0.06	0.04	0.03	0.10	0.04	0.02	0.01	0.06	0.03	0.03
	Min	1.64	0.11	0.49	0.33	0.36	0.79	1.11	0.51	0.53	0.13	0.80	0.27	0.17
	Max	1.77	0.15	0.55	0.39	0.40	0.82	1.20	0.54	0.55	0.14	0.86	0.30	0.20
	Count	4	4	4	4	4	4	4	4	4	4	4	4	4
F	**Mean**	**1.76**	**0.13**	**0.57**	**0.40**	**0.39**	**0.85**	**1.24**	**0.58**	**0.57**	**0.15**	**0.80**	**0.27**	**0.19**
	Count	1	1	1	1	1	1	1	1	1	1	1	1	1

TABLE 1
(*Continued*)

Species		Length					Width							
		Clyp-Cun	Head	Pronotum	Scutellum	Cuneus	Head	Pronotum	Scutellum	InterOcDist	AI	AII	AIII	AIV
nigrus														
F	**Mean**	**2.27**	**0.14**	**0.65**	**0.52**	**0.56**	**1.13**	**1.58**	**0.78**	**0.66**	**0.15**	**0.93**	**0.32**	**0.21**
	Count	1	1	1	1	1	1	1	1	1	1	1	1	1
pilbarensis														
M	**Mean**	**1.92**	**0.16**	**0.59**	**0.44**	**0.48**	**1.08**	**1.34**	**0.65**	**0.65**	**0.17**	**0.89**	**0.32**	**0.20**
	SD	0.09	0.02	0.04	0.02	0.05	0.03	0.06	0.02	0.03	0.03	0.03	0.02	0.01
	Range	0.22	0.04	0.11	0.04	0.12	0.08	0.14	0.04	0.06	0.07	0.08	0.05	0.03
	Min	1.82	0.13	0.55	0.42	0.43	1.04	1.25	0.62	0.61	0.13	0.84	0.30	0.18
	Max	2.03	0.18	0.67	0.45	0.54	1.12	1.39	0.66	0.67	0.20	0.92	0.34	0.21
	Count	5	5	5	5	5	5	5	5	5	5	5	5	4
F	**Mean**	**2.09**	**0.20**	**0.63**	**0.47**	**0.51**	**1.13**	**1.43**	**0.72**	**0.70**	**0.17**	**0.85**	**0.34**	**0.21**
	SD	0.17	0.02	0.06	0.04	0.04	0.07	0.14	0.07	0.06	0.02	0.07	0.03	0.02
	Range	0.40	0.06	0.14	0.10	0.09	0.17	0.37	0.16	0.12	0.05	0.19	0.07	0.04
	Min	1.86	0.18	0.56	0.42	0.46	1.04	1.25	0.65	0.65	0.14	0.75	0.31	0.19
	Max	2.26	0.24	0.70	0.52	0.56	1.21	1.62	0.81	0.77	0.20	0.95	0.38	0.23
	Count	5	5	5	5	5	5	5	5	5	5	5	5	4
prolixipenis														
M	**Mean**	**2.28**	**0.16**	**0.70**	**0.49**	**0.57**	**1.16**	**1.58**	**0.80**	**0.59**	**0.19**	**1.16**	**0.33**	**0.19**
	Count	1	1	1	1	1	1	1	1	1	1	1	1	1
pteraulos														
M	**Mean**	**2.02**	**0.15**	**0.59**	**0.47**	**0.43**	**0.94**	**1.40**	**0.67**	**0.55**	**0.16**	**1.02**	**0.31**	**0.23**
	SD	0.06	0.03	0.05	0.03	0.04	0.02	0.03	0.02	0.01	0.03	0.05	0.03	0.02
	Range	0.15	0.08	0.13	0.07	0.08	0.05	0.07	0.04	0.02	0.07	0.11	0.09	0.04
	Min	1.97	0.11	0.49	0.43	0.39	0.92	1.35	0.66	0.55	0.12	0.99	0.26	0.21
	Max	2.11	0.19	0.63	0.51	0.47	0.97	1.42	0.70	0.56	0.20	1.09	0.35	0.24
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5
F	**Mean**	**2.02**	**0.17**	**0.62**	**0.44**	**0.42**	**0.94**	**1.33**	**0.65**	**0.58**	**0.17**	**1.00**	**0.26**	**0.19**
	Count	1	1	1	1	1	1	1	1	1	1	1	1	1

TABLE 1
(*Continued*)

Species		Length					Width							
		Clyp-Cun	Head	Pronotum	Scutellum	Cuneus	Head	Pronotum	Scutellum	InterOcDist	AI	AII	AIII	AIV
punctatus														
M	**Mean**	**2.05**	**0.14**	**0.68**	**0.50**	**0.50**	**0.89**	**1.53**	**0.73**	**0.56**	**0.16**	**0.98**	**0.31**	**0.17**
	SD	0.13	0.03	0.05	0.03	0.04	0.03	0.08	0.03	0.02	0.02	0.13	0.02	0.04
	Range	0.31	0.07	0.10	0.06	0.10	0.06	0.18	0.07	0.05	0.03	0.24	0.04	0.08
	Min	1.93	0.11	0.62	0.47	0.46	0.86	1.45	0.70	0.53	0.15	0.88	0.30	0.12
	Max	2.24	0.17	0.72	0.53	0.56	0.92	1.63	0.77	0.58	0.18	1.13	0.34	0.19
	Count	4	4	4	4	4	4	4	4	4	3	3	3	3
F	**Mean**	**2.08**	**0.13**	**0.70**	**0.53**	**0.47**	**0.89**	**1.51**	**0.74**	**0.56**	**0.16**	**0.90**	**0.28**	**0.17**
	SD	0.05	0.01	0.07	0.02	0.02	0.03	0.08	0.05	0.03	0.02	0.04	0.02	0.03
	Range	0.12	0.03	0.18	0.05	0.05	0.08	0.20	0.11	0.08	0.05	0.08	0.06	0.08
	Min	2.03	0.11	0.63	0.50	0.44	0.85	1.41	0.69	0.52	0.13	0.85	0.24	0.13
	Max	2.15	0.14	0.81	0.55	0.49	0.94	1.60	0.80	0.60	0.18	0.94	0.30	0.21
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5
ruwenzorii														
F	**Mean**	**2.15**	**0.12**	**0.66**	**0.50**	**0.45**	**0.89**	**1.48**	**0.71**	**0.57**	**0.16**	**0.97**	**0.28**	**0.17**
	Count	1	1	1	1	1	1	1	1	1	1	1	1	1
sommelieri														
F	**Mean**	**1.88**	**0.14**	**0.60**	**0.43**	**0.41**	**0.80**	**1.26**	**0.62**	**0.50**	**0.14**	**0.68**	**0.29**	**0.17**
	SD	0.05	0.02	0.03	0.01	0.02	0.06	0.12	0.03	0.04	0.01	0.03	0.00	0.01
	Range	0.10	0.03	0.05	0.02	0.03	0.10	0.22	0.05	0.07	0.01	0.06	0.00	0.01
	Min	1.84	0.13	0.57	0.41	0.39	0.73	1.12	0.60	0.45	0.13	0.65	0.29	0.17
	Max	1.94	0.16	0.62	0.43	0.42	0.83	1.34	0.65	0.53	0.14	0.71	0.29	0.18
	Count	3	3	3	3	3	3	3	3	3	3	3	2	2
tahitiensis														
M	**Mean**	**2.44**	**0.16**	**0.67**	**0.55**	**0.58**	**1.23**	**1.63**	**0.77**	**0.75**	**0.25**	**1.38**	**0.50**	**0.25**
	SD	0.23	0.03	0.06	0.06	0.04	0.09	0.15	0.06	0.05	0.02	0.07	0.06	0.02
	Range	0.64	0.08	0.14	0.15	0.11	0.22	0.37	0.14	0.14	0.04	0.16	0.10	0.03
	Min	2.11	0.13	0.58	0.50	0.52	1.15	1.47	0.72	0.69	0.23	1.29	0.46	0.24
	Max	2.75	0.21	0.72	0.66	0.63	1.37	1.84	0.86	0.83	0.27	1.45	0.56	0.27
	Count	5	5	5	5	5	5	5	5	5	5	4	3	3

TABLE 1
(*Continued*)

Species		Length					Width							
		Clyp-Cun	Head	Pronotum	Scutellum	Cuneus	Head	Pronotum	Scutellum	InterOcDist	AI	AII	AIII	AIV
tahitiensis (continued)														
F	**Mean**	**2.48**	**0.17**	**0.69**	**0.57**	**0.64**	**1.27**	**1.71**	**0.81**	**0.76**	**0.24**	**1.36**	**0.46**	**0.22**
	SD	0.15	0.01	0.04	0.02	0.02	0.03	0.08	0.05	0.05	0.04	0.11	0.07	0.02
	Range	0.40	0.03	0.10	0.05	0.04	0.08	0.20	0.15	0.11	0.09	0.29	0.16	0.06
	Min	2.25	0.15	0.65	0.55	0.61	1.23	1.61	0.74	0.69	0.21	1.27	0.34	0.19
	Max	2.65	0.18	0.75	0.60	0.66	1.31	1.81	0.89	0.80	0.30	1.56	0.51	0.25
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5
testaceous														
F	**Mean**	**1.93**	**0.14**	**0.63**	**0.43**	**0.47**	**0.84**	**1.33**	**0.64**	**0.53**	**0.15**	**0.85**	**0.33**	**0.15**
	SD	0.14	0.01	0.04	0.04	0.04	0.05	0.09	0.05	0.02	0.01	0.05	0.02	0.08
	Range	0.33	0.03	0.10	0.11	0.09	0.13	0.21	0.14	0.06	0.03	0.14	0.04	0.21
	Min	1.70	0.12	0.57	0.36	0.40	0.77	1.17	0.57	0.49	0.14	0.76	0.31	0.00
	Max	2.03	0.15	0.67	0.47	0.49	0.90	1.38	0.71	0.55	0.17	0.90	0.35	0.21
	Count	5	5	5	5	5	5	5	5	5	5	5	4	4
thalame														
F	**Mean**	**2.45**	**0.16**	**0.70**	**0.56**	**0.57**	**1.17**	**1.66**	**0.90**	**0.73**	**0.22**	**1.19**		
	Count	1	1	1	1	1	1	1	1	1	1	1		
variegatus														
M	**Mean**	**1.62**	**0.14**	**0.48**	**0.37**	**0.40**	**0.94**	**1.14**	**0.57**	**0.59**	**0.18**	**0.88**	**0.30**	**0.21**
	SD	0.10	0.04	0.05	0.03	0.04	0.03	0.05	0.04	0.02	0.02	0.04	0.01	0.03
	Range	0.25	0.09	0.11	0.07	0.10	0.08	0.12	0.11	0.05	0.06	0.10	0.04	0.06
	Min	1.53	0.10	0.43	0.33	0.36	0.90	1.09	0.52	0.56	0.15	0.83	0.28	0.19
	Max	1.79	0.19	0.54	0.40	0.46	0.98	1.21	0.63	0.61	0.21	0.93	0.32	0.25
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5
F	**Mean**	**1.77**	**0.17**	**0.51**	**0.41**	**0.45**	**0.98**	**1.21**	**0.59**	**0.63**	**0.17**	**0.87**	**0.30**	**0.23**
	SD	0.15	0.02	0.06	0.05	0.04	0.07	0.10	0.08	0.04	0.02	0.09	0.01	0.02
	Range	0.41	0.06	0.13	0.13	0.08	0.19	0.24	0.20	0.09	0.05	0.24	0.03	0.04
	Min	1.55	0.14	0.43	0.34	0.41	0.89	1.07	0.50	0.57	0.14	0.73	0.29	0.22
	Max	1.96	0.21	0.57	0.47	0.50	1.08	1.31	0.70	0.66	0.19	0.97	0.32	0.26
	Count	5	5	5	5	5	5	5	5	5	5	5	5	5

TABLE 1
(Continued)

Species		Length					Width			InterOcDist	AI	AII	AIII	AIV
		Clyp-Cun	Head	Pronotum	Scutellum	Cuneus	Head	Pronotum	Scutellum					
zetteli														
M	**Mean**	**1.80**	**0.14**	**0.61**	**0.39**	**0.45**	**0.80**	**1.24**	**0.59**	**0.49**	**0.15**	**0.88**	**0.33**	**0.22**
	SD	0.07	0.03	0.04	0.04	0.03	0.01	0.02	0.01	0.01	0.02	0.05	0.03	0.02
	Range	0.15	0.09	0.11	0.09	0.06	0.03	0.06	0.02	0.03	0.04	0.12	0.05	0.03
	Min	1.72	0.11	0.57	0.33	0.42	0.79	1.22	0.58	0.48	0.13	0.81	0.30	0.20
	Max	1.87	0.19	0.68	0.42	0.48	0.82	1.27	0.60	0.51	0.17	0.93	0.35	0.23
	Count	5	5	5	5	5	5	5	5	5	5	4	3	3

caution. For example, the aedeagus in *Coridromius*, while membranous as in other halticines, is coupled with the left paramere to form a highly specialized intromittent organ unlike that of any other Halticini (or indeed any other Miridae). Furthermore, while the posterior wall of the female genitalia lacks interramal lobes, it also lacks any sclerotization whatsoever, a point of distinction.

BIOLOGY

Habitats and Microhabitats

Coridromius has a largely paleotropical distribution and is found in a wide range of habitats, from arid landscapes to wet tropical forests. Some of the species have widespread distributions and range across a number of habitat types; for example, *chenopoderis* is known from arid and semiarid shrubland and open woodland across temperate Australia. Many other species are known only from the type locality, such as the rainforest species *nigrus*, *prolixipenis*, *drepanopenis*, *epithema*, *ephippius*, and *sommelieri*, but generalizations about restricted habitat range cannot be made without more extensive collecting. While many species are known from either single or very few specimens, others have been collected in very large numbers (e.g., the Australian species *chenopoderis*, *monotocopsis*, and *pilbarensis*, the northern Sulawesi species *confusus*, and the type species *variegatus*).

Coridromius is thought to be phytophagous, with a number of species found most commonly on the reproductive components of their host plants, both on buds and mature flowers, but also on leaves and stems (e.g., *chenopoderis*, *chinensis*, *monotocopsis*, *variegatus*; figs. 1 and 2). There are occurrences of multiple species of *Coridromius* co-occurring on the same host plants without evidence of resource partitioning. For example, in southern China one of us (NT) collected *chinensis*, *zetteli*, and *testaceous* all on the same *Macaranga* tree (Euphorbiaceae) at the same time. Similarly, there are several species that are known from the same collecting locality, sometimes even the same collecting event. For example, *drepanopenis*, *falsicoleus*, *pteraulos*, and *sommelieri* were all collected by T.

TABLE 2
Host plants of various *Coridromius* species

Species	Host plant genus and species	Plant family	Plant Order	Number of specimens collected
bicolor	*Macaranga sp.*	Euphorbiaceae	Malpighiales	5
bicolor	*Mallotus sp.*	Euphorbiaceae	Malpighiales	7
bicolor	*Mangifera sp.*	Anacardiaceae	Sapindales	2
boianotum	*Acalypha sp.*	Euphorbiaceae	Malpighiales	1
boianotum	unknown sp.	Urticaceae	Rosales	1
boianotum	*Pipturus sp.*	Urticaceae	Rosales	10
bulbopella	*Berkheya bipinnatifida*	Asteraceae	Asterales	6
chenopoderis	*Olearia axillaris*	Asteraceae	Asterales	3
chenopoderis	*Olearia muelleri*	Asteraceae	Asterales	22
chenopoderis	*Lepidium oleraceum*	Brassicaceae	Brassicales	7
chenopoderis	unknown sp.	Chenopodiaceae	Caryophyllales	16
chenopoderis	*Atriplex amnicola*	Chenopodiaceae	Caryophyllales	47
chenopoderis	*Atriplex isatidea*	Chenopodiaceae	Caryophyllales	60
chenopoderis	*Atriplex nummularia omissa*	Chenopodiaceae	Caryophyllales	3
chenopoderis	*Chenopodium auricomum*	Chenopodiaceae	Caryophyllales	79
chenopoderis	*Chenopodium murale*	Chenopodiaceae	Caryophyllales	140
chenopoderis	*Einadia nutans subsp. nutans*	Chenopodiaceae	Caryophyllales	15
chenopoderis	*Enchylaena tomentosa var. tomentosa*	Chenopodiaceae	Caryophyllales	3
chenopoderis	*Halosarcia indica bidens*	Chenopodiaceae	Caryophyllales	20
chenopoderis	*Maireana oppositifolia*	Chenopodiaceae	Caryophyllales	25
chenopoderis	*Rhagodia sp.*	Chenopodiaceae	Caryophyllales	7
chenopoderis	*Rhagodia baccata*	Chenopodiaceae	Caryophyllales	88
chenopoderis	*Rhagodia baccata baccata*	Chenopodiaceae	Caryophyllales	13
chenopoderis	*Rhagodia latifolia subsp. latifolia*	Chenopodiaceae	Caryophyllales	11
chenopoderis	*Rhagodia parabolica*	Chenopodiaceae	Caryophyllales	34
chenopoderis	*Rhagodia preissi*	Chenopodiaceae	Caryophyllales	60
chenopoderis	*Rhagodia preissii preissii*	Chenopodiaceae	Caryophyllales	53
chenopoderis	*Rhagodia preissii subsp. obovata*	Chenopodiaceae	Caryophyllales	34
chenopoderis	*Rhagodia spinescens*	Chenopodiaceae	Caryophyllales	9
chenopoderis	*Salsola tragus subsp. tragus*	Chenopodiaceae	Caryophyllales	128
chenopoderis	*Suaeda australis*	Chenopodiaceae	Caryophyllales	18
chenopoderis	*Frankenia sp.*	Frankeniaceae	Caryophyllales	1
chenopoderis	*Muehlenbeckia florulenta*	Polygonaceae	Caryophyllales	14
chenopoderis	*Acacia sp.*	Fabaceae	Fabales	20
chenopoderis	*Acacia acinacea*	Fabaceae	Fabales	1
chenopoderis	*Acacia oswaldii*	Fabaceae	Fabales	6
chenopoderis	*Acacia longifolia*	Fabaceae	Fabales	2
chenopoderis	*Allocasuarina humilis*	Casuarinaceae	Fagales	1
chenopoderis	*Dicrastylis fulva forma fulva*	Lamiaceae	Lamiales	1
chenopoderis	*Teucrium racemosum*	Lamiaceae	Lamiales	1
chenopoderis	*Eremophila forrestii*	Scrophulariaceae	Lamiales	1
chenopoderis	*Eremophila ionantha*	Scrophulariaceae	Lamiales	1
chenopoderis	*Eremophila mitchellii*	Scrophulariaceae	Lamiales	4
chenopoderis	*Myoporum insulare ?*	Scrophulariaceae	Lamiales	6
chenopoderis	*Alyogyne pinoniana*	Malvaceae	Malvales	2
chenopoderis	*Pimelea ferruginea*	Thymelaeaceae	Malvales	2
chenopoderis	*Pimelea rosea*	Thymelaeaceae	Malvales	1
chenopoderis	*Agonis parviceps*	Myrtaceae	Myrtales	1
chenopoderis	*Melaleuca brevifolia*	Myrtaceae	Myrtales	1
chenopoderis	*Melaleuca uncinata*	Myrtaceae	Myrtales	3
chenopoderis	*Scholtzia capitata*	Myrtaceae	Myrtales	19
chenopoderis	*Scholtzia drummondii*	Myrtaceae	Myrtales	2

TABLE 2
(*Continued*)

Species	Host plant genus and species	Plant family	Plant Order	Number of specimens collected
chenopoderis	*Hakea leucoptera*	Proteaceae	Proteales	110
chenopoderis	*Hakea mitchellii*	Proteaceae	Proteales	1
chenopoderis	*Malus sp.*	Rosaceae	Rosales	16
chenopoderis	*Prunus sp.*	Rosaceae	Rosales	2
chenopoderis	*Prunus sp.*	Rosaceae	Rosales	9
chenopoderis	*Amyema cambagei*	Loranthaceae	Santalales	1
chenopoderis	*Amyema quandang var. quandang*	Loranthaceae	Santalales	1
chenopoderis	*Exocarpos aphyllus*	Santalaceae	Santalales	19
chenopoderis	*Nitraria billardierei*	Nitrariaceae	Sapindales	19
chenopoderis	*Flindersia maculosa*	Rutaceae	Sapindales	6
chenopoderis	*Nitraria billardierei*	Nitrariaceae	Sapindales	30
chinensis	*Macaranga sp.*	Euphorbiaceae	Malpighiales	57
chinensis	*Mallotus japonicus*	Euphorbiaceae	Malpighiales	4
chinensis	*Pentaspodon motleyi*	Anacardiaceae	Sapindales	1
minusculus	unknown sp.	Cyperaceae	Poales	1
monotocopsis	*Chrysanthemoides monolifera*	Asteraceae	Asterales	1
monotocopsis	*Brachyloma daphnoides*	Ericaceae	Ericales	8
monotocopsis	*Monotoca sp.*	Ericaceae	Ericales	16
monotocopsis	*Monotoca elliptica*	Ericaceae	Ericales	364
monotocopsis	*Acacia longifolia*	Fabaceae	Fabales	1
pilbarensis	*Scaevola crassifolia*	Goodeniaceae	Asterales	1
pilbarensis	*Atriplex bunburyana*	Amaranthaceae	Caryophyllales	16
pilbarensis	*Gastrolobium spinosum*	Fabaceae	Fabales	1
pilbarensis	*Agonis linearifolia ?*	Myrtaceae	Myrtales	1
pilbarensis	*Melameuca hamulosa*	Myrtaceae	Myrtales	6
pilbarensis	*Melaleuca rhaphiophylla*	Myrtaceae	Myrtales	1
pilbarensis	*Melaleuca sheathiana*	Myrtaceae	Myrtales	3
pilbarensis	*Melaleuca uncinata*	Myrtaceae	Myrtales	21
pilbarensis	*Santalum lanceolatum*	Santalaceae	Santalales	4
pilbarensis	*Euroschinus falcata*	Anacardiaceae	Sapindales	5
pilbarensis	*Schinus areira*	Anacardiaceae	Sapindales	2
pilbarensis	*Dodonaea viscosa angustissima*	Sapindaceae	Sapindales	28
prolixipenis	*Homalanthus sp.*	Euphorbiaceae	Malpighiales	1
punctatus	*Rubus sp.*	Rosaceae	Rosales	1
testaceous	*Macaranga sp.*	Euphorbiaceae	Malpighiales	7
testaceous	unknown sp.	Cyperaceae	Poales	2
variegatus	*Phyllanthus sp.*	Euphorbiaceae	Malpighiales	25
variegatus	unknown sp.	Sapindaceae	Sapindales	24
zetteli	*Macaranga* sp.	Euphorbiaceae	Malpighiales	2

C. Maa in Tenompok, Sabah, between the 10th and 19th of September 1959. Unfortunately no host data were recorded for these collecting events.

Host Plant Associations

Host plant associations are known for 12 of the 32 species documented in this work (see table 2), with the vast majority of host records coming from the Australian species *chenopoderis*, which is undoubtedly polyphagous.

It is well-known that many Heteroptera are associated with higher angiosperm clades such as the rosids and asterids (Cassis and Gross, 2002; Cassis and Vanags, 2006; Cassis et al., 2007); this also appears to be the case for *Coridromius*. There are two records of *Coridromius* species on monocots, with *minusculus* (in Papua New Guinea) and *testaceous* (in Laos) collected from undetermined

Cyperaceae species, but in both cases the records refer to only one or two specimens and may only be sitting records.

Excluding the extensive list of host plant associations known for *chenopoderis* and the single host record of *minusculus*, 11 of the species of *Coridromius* with host records are known from rosid angiosperms. The majority of these have been collected from the family Euphorbiaceae (*bicolor*, *boianotum*, *prolixipenis*, *testaceous*, *variegatus*, and *zetteli*). Only two species are known from asterids: *bulbopella* from South Africa and *monotocopsis* from eastern Australia.

The ubiquitous Australian species *chenopoderis*, which has also been discovered extralimitally in Hawaii and parts of southern North America, is most commonly associated with chenopods (Chenopodiaceae; 17 species, see table 2). However, on two separate occasions it has been taken on the proteaceous genus *Hakea*, with over 100 specimens at one location. Another Australian species, *pilbarensis*, has also been collected from a chenopod at a single location. Although chenopods are common hosts for *Coridromius* within Australia, no other species of *Coridromius* are known from chenopods elsewhere.

Sexual Behavior

The genitalia of *Coridromius* males are unique among the Miridae, with the left paramere and aedeagus coupled to form a scythelike copulatory organ, analogous to that found in the Cimicidae, Polyctenidae, and some Anthocoridae. Members of these three families mate by a process termed "traumatic insemination", whereby males stab females in the abdomen with their needlelike genitalia and ejaculate into their body cavity (Carayon, 1966, 1977). It is thought that this form of mating has evolved as a means for males to circumvent female pre- or postmating resistance (Stutt and Siva-Jothy, 2001; Arnqvist and Rowe, 2005). Not surprisingly, this form of mating is costly to females in terms of physical damage (Morrow and Arnqvist, 2003) and increased risk of infection (Reinhardt et al., 2003). In response, females of many of these species have evolved internal and external paragenital structures, collectively known as the "spermalege" (Carayon, 1959, 1966, 1977) to receive the intromittent organ and sperm, and to reduce the costs of mating (Stutt and Siva-Jothy, 2001; Morrow and Arnqvist, 2003; Reinhardt et al., 2003).

As in the above taxa, *Coridromius* is also now known to practice traumatic insemination, with the females of many species exhibiting elaborate paragenitalia (Tatarnic et al., 2006). We have observed the mating behavior of four species in captivity (*chenopoderis*, *chinensis*, *monotocopsis*, and *variegatus*). When several specimens of both sexes were kept in small test tubes with host plant clippings, males were observed pouncing on the dorsum of nearby individuals, generally females but occasionally other males and even nymphs. In all cases mounted individuals would shake vigorously, jump about, and kick in an apparent attempt to dislodge their would-be suitors. During these struggles mounting males curled their abdomens over to the right side of their mate's body, extended their left paramere and attempted to stab their partner anteriorly along the right side of the abdomen. Such mating attempts were very brief, never lasting more than about 30 seconds.

TAXONOMY

Coridromius Signoret

Ocypus Montrouzier, 1861: 67, junior homonym of *Ocypus* Leach, *in* Samouelle, 1819: 172 (Coleoptera). Type species: *Ocypus variegatus* Montrouzier, 1861, by monotypy.

Coridromius Signoret, 1862: 5 (nom. nov. for *Ocypus* Montrouzier 1861).

Neocypus Distant, 1914: 378 (unnecessary nom. nov. for *Ocypus* Montrouzier, 1861). Carvalho, 1987: 61; Linnavuori, 1994: 15; Schuh, 1995: 46; Cassis and Gross, 1995: 185; Liu and Zhao, 1999: 55; Miyamoto and Yasunaga, 1999: 33; Chérot et al., 2004: 57.

Coridromoides Carvalho, 1956: 54 (new genus). Type species: *Coridromoides carinatus* Carvalho, 1956, by original designation.

Diagnosis: *Coridromius* is recognized by the following character states: body compact and stout (figs. 1–5); small, with most species between 2–3 mm in length (table 1); short and broad head with substylate eyes (figs. 4–

6); hemelytra sharply deflected at cuneal fracture; greatly enlarged metafemora, frequently marked with dark brown diagonal banding (figs. 1–3); femora with recessed bothria; aedeagus simple, membranous, without sclerotizations (figs. 12A, 17A); left paramere larger than right and generally scythe-shaped, with gutter running from base to apex, coupled with aedeagus to form piercing intromittent organ (figs. 12A, 17A); right paramere smaller than left, triangulate to club-shaped, sometimes with short and rounded (e.g., figs. 10B–C, 10G–H) or long and sharp (e.g., figs. 7O–P) apical process; female genitalia reduced, with the posterior wall entirely membranous (fig. 20A); female paragenitalia sometimes present (figs., 8C–D, 9C–D, 11C–D, 11G–H, 13A–B, 13D–F, 16C–D, 18F–G, 19B–C, 19G, 20B–C, 21A). *Coridromius* is readily distinguished from all other Halticini (and all other Miridae) by its unique male genitalia.

REDESCRIPTION: COLORATION: Variable, but typically brown with various brown, yellow, and cream-colored markings; frequently with dark brown vittae on frons and transverse stripes on outer surface of metafemur (e.g., figs. 1–3). SURFACE AND VESTITURE: Head, pronotum, scutellum, propleuron, metepimeron, and hemelytra impunctate to punctate; broadly covered with short or long simple, white, decumbent setae. STRUCTURE: Head (fig. 6): Transverse, short; eyes substylate; frons tumescent medially, shallowly depressed adjacent to eyes; vertex usually with a pair of slightly raised tubercles adjacent to eyes, bordered posteriorly by shallow foveae; posterior margin of head weakly to strongly medially rounded; mandibular and maxillary plates well defined; gena sometimes swollen; clypeus prominent; buccula arcuate and flared; labium reaching slightly beyond hind coxae. Antenna: AI very short and cylindrical (approximately five times shorter than width of vertex); AII about one-fifth longer than AI and apically clavate; AIII short, about twice as long as AI; AIV about as long as AI (table 1). Thorax: Pronotum broad and convex, anterolateral margins usually somewhat upturned, submarginal region of humeral angles shallowly excavate, collar present and rounded, visible from above, callar region either undifferentiated or weakly defined, lateral margins sometimes carinate; mesoscutum steeply declivent, sometimes visible, scutellum flat or swollen and rounded, sometimes with rounded lobe at apex (e.g., fig. 1D); proepisternum lobate, with either one (figs. 3C, 13C) or two (figs. 3C, 18A) lobes projecting laterally; metathoracic spiracle prominent; metepimeron platelike, with posterior margin either truncate (e.g., figs. 8E, 11C) or extending partly over abdomen (e.g., figs. 9E–F, 11G–H, 13E–F); metanotum sometimes raised into a vertical transverse plate separating thorax from abdomen, with lateral margins prominent and flared (figs. 9C–D, 16C–D). Metathoracic gland: External efferent system reduced, peritreme elongate, fingerlike, along posterior margin of metepisternum, bounded anteriorly by a thin strip of evaporative bodies. Hemelytra: Macropterous; steeply declivent at cuneal fracture; embolium thin and platelike, sometimes flared; cuneus small and triangular. Legs: Metafemur swollen, laterally compressed near apex; caudal margin of hind tibia with two rows of minute spines interspersed with longer spines, sometimes noticeably thickened (fig. 3A). MALE GENITALIA: Pygophore trapeziform, posterior margin typically biconcave, sometimes with fold (figs. 8A, 8H, 14D, 16A, 21C–D), groove (figs. 11E–F, 14G–H, 19H) or mesal suture on left side (figs. 9A, 9H, 11A, 13H, 14F, 16E, 19D, 21A), sometimes with ventral apical process projecting from right side (figs. 9A, 9G–H, 11A, 13H, 14E–F, 16A–B, 16E, 18D, 19D); parameres heavily sclerotized; right paramere always smaller than left, usually either triangular and somewhat elongate (figs. 7B–C, 7E–G, 7L–M, 10J, 12B–C, 12E–F 12K–L, 12O–P, 15B–C, 17B–D, 17M–O, 17Q–R), boot-shaped (figs. 7I–J, 15H–I), or club-shaped with a long, spinelike (figs. 7O–P, 7R–S, 12N–O, 17F–G) or short and more rounded (figs. 10B–D, 10F–H, 15E–F, 17B–D, 17P–Q) apical process; left paramere generally curved and scythelike, sometimes with one to several tight coils (e.g., figs. 7H, 8F, 17H, 17S, 19E–F, 21D), apically acuminate, with cleft gutter running entire length, sometimes completely enclosed until apex (figs. 7Q, 9G–H, 15D, 14E–F); aedeagus simple, flagellate, with

Fig. 4. Habitus views of *Coridromius* spp.: *bicolor–lestoni*.

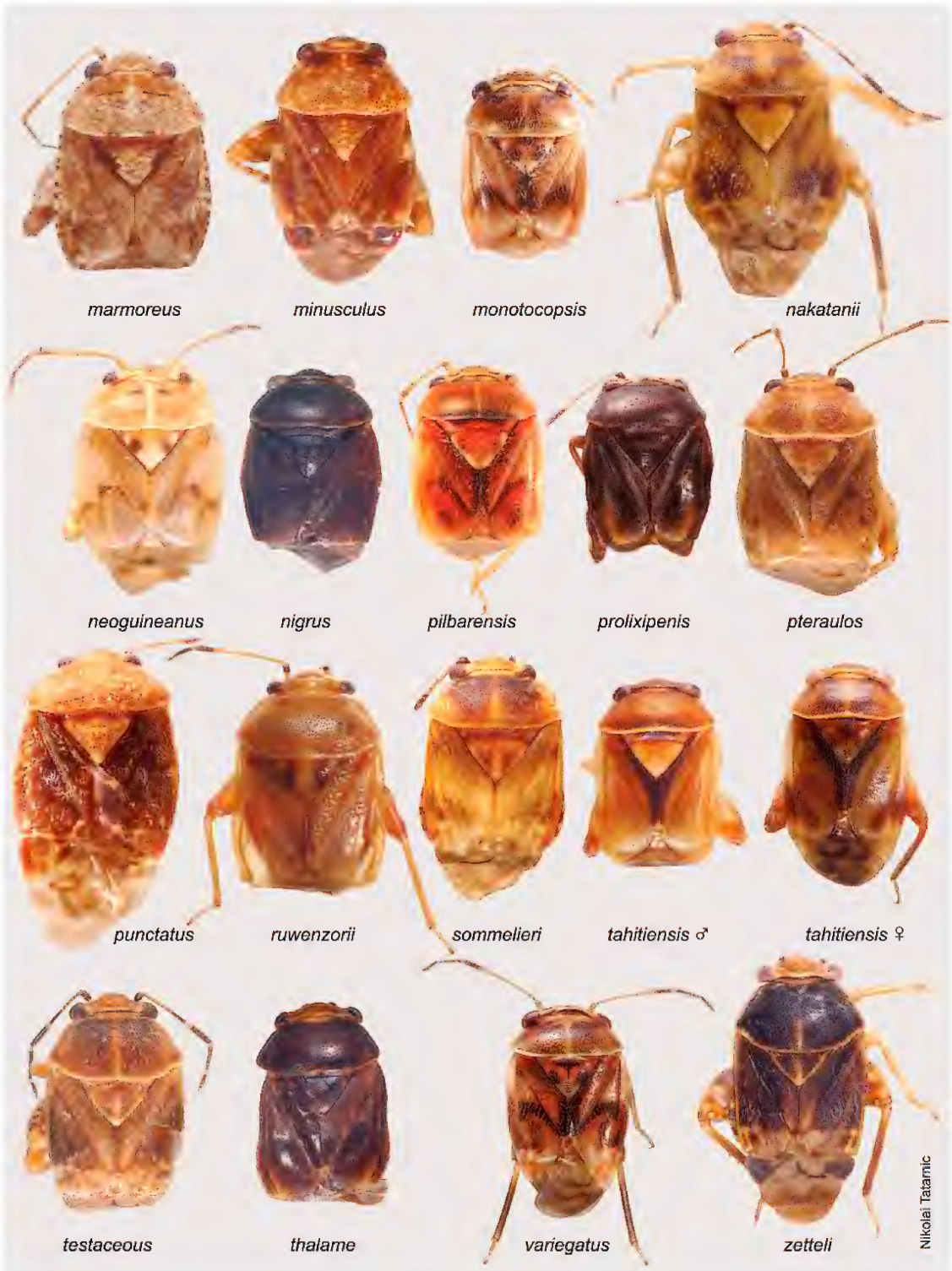


Fig. 5. Habitus views of *Coridromius* spp.: *marmoreus–zetteli*.

Fig. 6. Anterior view of head of *Coridromius* spp.

membranous to weakly sclerotized phallotheca and phallobase, permanently routed through channel of left paramere (e.g., fig. 17A). FEMALE GENITALIA: Simple and reduced, with posterior wall membranous, interramal lobes absent (e.g., fig. 20A); abdomen sometimes with visible external paragenital modifications.

REMARKS: The genus *Coridromius* is easily recognized by the unique body shape, extremely swollen hind femora and highly specialized male genitalia. While several species are easily identifiable by coloration and body shape, others are sometimes more difficult to place. For most species the male genitalia can typically be examined in situ, but often one must remove female specimens from points or remove the hemelytra in order to expose possible paragenital modifications, which have always been found on the right side of the abdomen. The following key is intended to be used with both sexes, except in those species that are known by one sex.

KEY TO SPECIES OF *CORIDROMIUS*

1. Proepisternum bilobed (figs. 3C, 18A); metanotum prominent and flared (fig. 16C–D) 2
– Proepisternum unilobed (figs. 3C, 13C); metanotum not prominent and flared (fig. 13D) 17
2. Metepimeron punctate (figs. 13A, 16G, 19A–B); right paramere club-shaped with short, rounded process, appearing U-shaped from above (figs. 10B–D, 10F–H, 15E–F, 17B–D, 17I–K, 17T–U). 3
– Metepimeron impunctate (figs. 8E, 9E–F, 11G, 13E, 14B, 18C, H, 19G); right paramere not club-shaped, not appearing U-shaped when viewed from above 6
3. Costal margin of hemelytron straight and weakly carinate (fig. 5: *sommelieri*, *testaceous*, *zetteli*) 4
– Costal margin of hemelytron weakly to strongly flared posteriorly (fig. 4: *crassus*, *declivipennis*, *falsicoleus*; fig. 5: *nakatanii*, *pteraulos*) 11
4. Male left paramere tightly corkscrewed (figs. 17H, 17S, 19E–F, 21D); female possibly with corkscrewed paragenital opening on right side of abdomen (fig. 19B–C) 5
– Known only from females, female without any visible paragenitalia; male suspected to not have corkscrewed left paramere (South China, Laos, Nepal, Sumatra, Vietnam) . . *testaceous*
5. Apex of male left paramere perpendicular to its axis, pygophore with triangular ventral apical process (figs. 17H, 19D–F); female with corkscrewed paragenital opening on right side of body (figs. 19B–C, 20B) (Sabah). . . . . *sommelieri*
– Apex of male left paramere almost parallel to its axis (figs. 17S, 21D); pygophore without apical process (fig. 21D); female unknown (South China, Laos, Vietnam) . . . . . *zetteli*
6. Dorsum with mottled cream and brown coloration (figs. 1D, 4: *chinensis*, *confusus*; fig. 5: *marmoreus*, *minusculus*, *punctatus*) 7
– Not with mottled cream and brown coloration 15
7. Both lobes of proepisternum of equal length (e.g., fig. 18A); lateral margins of pronotum and hemelytra without brown spots; right paramere rounded with long, sharp, triangular apical process (figs. 7O–P, 7R–S, 9A, 12N–O, 18D–E) 8
– Anterior lobe of proepisternum shorter than posterior lobe (fig. 14A); lateral margins of pronotum and hemelytra marked with small brown spots (fig. 5: *marmoreus*); right paramere without sharp, triangular apical process (fig. 12K–L) (Philippines). . . . . *marmoreus*
8. Apex of scutellum greatly swollen and rounded (figs. 1D, 4: *chinensis* 1, *chinensis* 2); AII without dark brown postmedial band (figs. 1D, 4: *chinensis*); gutter of left paramere open over entire length (figs. 7N, 9A) (India, Nepal, South China, Laos, Brunei, Japan, Taiwan, Vietnam) . . . . . *chinensis*
– Apex of scutellum only slightly swollen (fig. 4: *confusus*; fig. 5: *minusculus*, *punctatus*); AII with dark brown postmedial band; left paramere either entirely open or closed until apex. 9
9. AI dark brown with pale base and apex; AIII and AIV entirely dark brown; left paramere open over entire length (fig. 17E) (Papua New Guinea) . . . . . *punctatus*
– AI pale with broad, dark brown annulation; AIII and AIV dark brown, yellowish white basally; left paramere open or closed. . . . 10
10. Left paramere a thin, closed tube, open at apex (figs. 9G–H, 7Q) (Sulawesi, Solomon Islands) . . . . . *confusus*
– Left paramere open over entire length (fig. 12M) (Irian Jaya and Papua New Guinea) . . . . . *minusculus*
11. Costal margin of hemelytron weakly flared posteriorly (fig. 4: *declivipennis*, *falsicoleus*, fig. 5: *pteraulos*) 12
– Costal margin of hemelytron strongly flared posteriorly (fig. 4: *crassus*; fig. 5: *nakatanii*). 14

12. Body dark brown with yellow-orange markings (fig. 4: *falsicoleus*), female with prominent paragenital opening on right side of abdominal sternite II (figs. 20A–B); male unknown (India, Sabah) . . . . . *falsicoleus*
– Body color variable, not as above; female without prominent paragenital opening on right side of body 13
13. Posterolateral flaring of hemelytron rounded (fig. 5: *pteraulos*); anterolateral margin of hemelytron on female strongly recurved, forming a distinct gutter (figs. 3D, 16H); left posterior ventral margins of male abdominal segments VII and VIII with patch of strong, caudally directed bristlelike setae (fig. 16E–F) (Papua New Guinea, Sabah) . . . . *pteraulos*
– Posterolateral flaring of hemelytra angular (fig. 4: *declivipennis*); anterolateral margin of hemelytra on female not forming a curved tube; patch of setae on male abdominal segments VII and VIII much less distinct than in *pteraulos* (Japan) . . . . . *declivipennis*
14. Dark brown apical annulation on AII separated from postmedial dark brown band by thin white annulation (fig. 5: *nakatanii*); left paramere long, thin, and enclosed until apex (figs. 14E–F, 15D), female with prominent paragenital opening on right side within abdominal sternite II (Laos, Vietnam). . . . . *nakatanii*
– AII with dark brown apical annulation and subapical whiteannulation, but no dark postmedial band (fig. 4: *crassus*); left paramere thick and relatively long, not enclosed until apex (fig. 10A) (North Sulawesi). . . *crassus*
15. Body small, brown, and punctate; posterior margin of embolium strongly flared outward, cuneal fracture deep (fig. 4: *lestoni*); dorsolateral margins of abdomen grooved (Ghana). . . . . *lestoni*
– Uniform brownish yellow with two large dark brown spots on scutellum (fig. 4: *bulbopella*; fig. 5: *ruwenzorii*); posterior margin of vertex broadly rounded (fig. 6). 16
16. Head smooth and impunctate; female and male with "cup and bulb" structure on right abdominal tergites II and III, hidden by hemelytra (fig. 8C–D); male left paramere long and thin with single twist at base (fig. 8F) (South Africa, Kenya, Tanzania) . . . . . *bulbopella*
– Head smooth and weakly punctate; female with small lobed projection on right abdominal tergites II and III, hidden by hemelytra (fig. 18F–G); male unknown (Uganda) . . . . . *ruwenzorii*
17. Anterolateral margins of pronotum projecting as rounded lobes, uniform brownish yellow with two dark brown spots on scutellum (fig. 4: *boianotum*); posterior margin of pygophore weakly bisinuate, without deep groove, fold, or suture on left side (fig. 8B) (Solomon Islands, Vanuatu) . . . . . *boianotum*
– Anterolateral margins of pronotum not projecting as rounded lobes; coloration variable; posterior margin of pygophore with or without groove, fold or mesal suture on left side 18
18. Pronotum campanulate, much wider posteriorly; deeply punctate; anterior of humeral angles projecting forward; brownish yellow (fig. 4: *carinatus*) (Palau) . . . . . *carinatus*
– Pronotum not campanulate; anterior of humeral angles not projecting forward; coloration and texture variable 19
19. Light tan in coloration, with paired dark brown spots on pronotum behind eyes, on pronotal disc, and on scutellum, hemelytra with brown transverse chevron pattern (fig. 5: *neoguineanus*); head with irregular dark brown band on clypeus, sometimes extending upward onto frons, middle of vertex with a single dark brown spot, frons without vittae (fig. 6: *neoguineanus*); right paramere boot-shaped (fig. 15H–I); posterior margin of pygophore with deep U-shaped groove right of centre (fig. 14G–H) (Papua New Guinea, Irian Jaya) . . . . . *neoguineanus*
– Coloration not as above; right paramere triangulate; groove or fold on left posterior margin of pygophore 20
20. Hemelytra always with dark brown "Y" along inner margin of clavus (fig. 5: *tahitiensis* ♂, *tahitiensis* ♀); left margin of pygophore with a deep U-shaped groove (fig. 19H); female with prominent intersegmental paragenital opening on right side of abdomen between segments II and III (figs. 26G, 27C) (Tahiti). . . . . *tahitiensis*
– Hemelytra without dark brown "Y" pattern along inner margin of clavus; folded groove on posterior margin of pygophore deep or shallow; female without paragenitalia as in *tahitiensis* 21
21. Metepimeron extended posteriorly as a long winglike lobe (figs. 11G, 13E); costal margin of hemelytron flared anteriorly, abruptly angled inward at midpoint (figs. 4: *epithema*, *hermosus*, 5: *nigrus*, *prolixipenis*) 22
– Metepimeron truncate or only slightly lobed; lateral margin of embolium not shaped as above. 25
22. Head with contrasting dark brown or black coloration above and yellow below, beginning at base of clypeus; yellow piping along

posterior margin of vertex and adjacent to eyes (fig. 6: *hermosus*, *prolixipenis*) 23
– Head not colored dark above and yellow below; with or without yellow piping . . . 24
23. Body orange-brown with two conspicuous black markings on anterior portion of pronotum, scutellum often bright orange (fig. 4: *hermosus*); head black above, yellow below (fig. 6: *hermosus*); metepimeron extended as a long, triangular lobe (fig. 13E); male left paramere thick and relatively long (figs. 12D, 13G); posterior margin of pygophore with broad ventral apical process (fig. 13H); right dorsal laterotergites II and III of female swollen and desclerotized (fig. 13D–F) (Papua New Guinea) . . . . . *hermosus*
– Body dark reddish brown above (fig. 5: *prolixipenis*); head dark reddish brown above and yellow below, with yellow piping (fig. 6: *prolixipenis*); fore- and middle legs yellow basally, hindlegs uniform dark reddish-brown; left paramere extremely long and thin (fig. 15M–N); posterior margin of pygophore without ventral apical process (fig. 15N); female unknown (Papua New Guinea) . . . . . *prolixipenis*
24. Body uniformly dark reddish brown to black with faint orange piping along margins of pronotum (fig. 5: *nigrus*); posterior margin of head, outer ocular margins and mandibular plates yellow-orange (fig. 6: *nigrus*); metafemur uniformly dark; metepimeron extended as a long, triangular lobe (as in fig. 13E); right abdominal laterotergites II and III of female swollen and desclerotized (as in fig. 13D–F); male unknown (Papua New Guinea) . . . . . *nigrus*
– Body uniformly orange-brown (fig. 4: *epithema*); head and pronotum with faint orange piping (fig. 6: *epithema*); metafemur uniformly dark, metepimeral lobe extremely long and apically rounded (fig. 11G); right abdominal laterotergites II and III of female swollen, membranous and saddle-shaped (fig. 11G–H); male unknown (Papua New Guinea) . . . . . *epithema*
25. Body uniformly dark brown (fig. 5: *thalame*) with orange-yellow legs and head (fig. 6: *thalame*); right abdominal segment II of female irregularly swollen, conspicuous paragenital opening between segments II and III (fig. 21A); male unknown (Sabah) . . . . . *thalame*
– Body not uniformly dark brown; female without paragenitalia as in *thalame* 26
26. Body nearly uniform brownish orange (fig. 4: *drepanopenis*); left paramere extremely long and thin (figs. 10I, 10K); posterior margin of pygophore with folded groove (fig. 10K); female unknown (Sabah) . . . . *drepanopenis*
– Body not colored as above; left paramere not extremely long and thin; groove on pygophore variable. 27
27. Dorsolateral margin of abdominal segment II of females extremely swollen, with laterally projecting tumescence at posterior margin of segment (fig. 11B–D); male with relatively long and thick left paramere (figs. 11E–F, 12A); left posterior margin of pygophore with shallow depression (Philippines) . . *ephippius*
– Females without visible external paragenitalia; right posterior margin of pygophore with distinct folded groove 28
28. Posterior margin of metepimeron with small but distinct rounded lobe projecting from upper corner (as in fig. 14B); folded groove on posterior margin of pygophore shallow (fig. 21B–C) (New Caledonia, Fiji) *variegatus*
– Posterior margin of metepimeron truncate; folded groove in pygophore shallow (fig. 21D) or deep (figs. 8H, 16A) 29
29. Body broad, generally light brown in color with darker brown markings (fig. 5: *monotocopsis*); pygophore with shallow folded groove (fig. 14D); left paramere marginally longer than in other Australian species (fig. 15A); found primarily on *Monotoca elliptica* (eastern Australia) . . . *monotocopsis*
– Body broad or narrow, either large and orange-brown with brown and yellow markings (fig. 5: *pilbarensis*) or small, ranging from almost black to olive in coloration (figs. 2B–C, 4: *chenopoderis* 1, *chenopoderis* 2); folded groove on pygophore deep (figs. 8H, 16A) 30
30. Body large and broad, orange-brown with brown and yellow markings (fig. 5: *pilbarensis*); pygophore with small tubercle to right of deep, folded groove (fig. 16A–B) (Australia). . . . . *pilbarensis*
– Body small and narrow, coloration varying from almost black to olive or light brown (figs. 2B–C, 4: *chenopoderis* 1, *chenopoderis* 2); folded groove on pygophore deep, without small tubercle on right side (fig. 8H); found primarily on Chenopodiaceae (Australia, New Zealand, Norfolk Island, Mexico, Arizona California, Florida, Hawaii, New Mexico, Texas) . . . . . *chenopoderis*

Coridromius bicolor, new species
Figures 4, 6, 7A–C, 8A, map 1

HOLOTYPE: Male: **VANUATU: Shefa:** Shepherd Group: Tongariki Island, 16.8°S 168.5°E, 0–300 m, 29 Aug 1979, W.C.

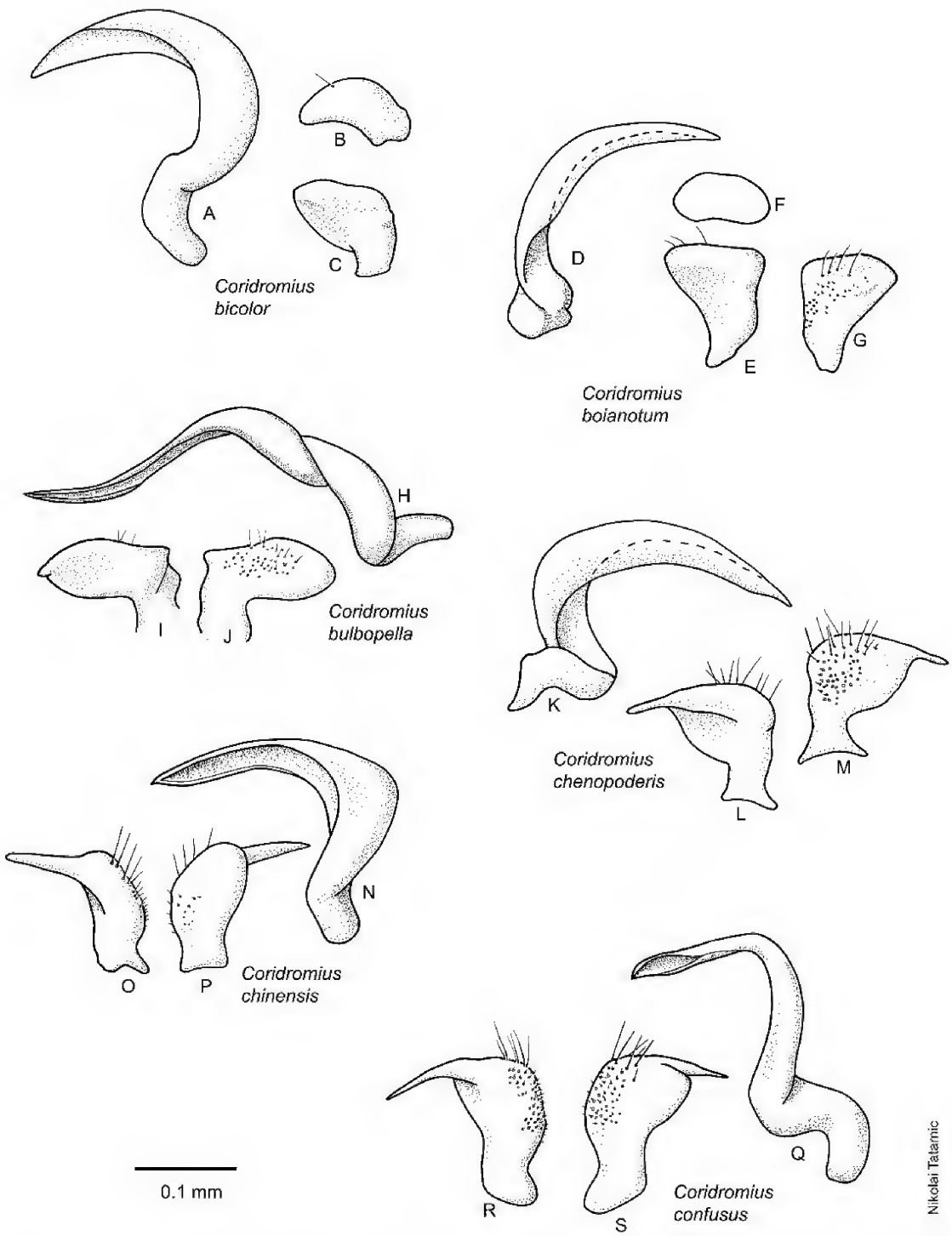


Fig. 7. Left and right parameres of *Coridromius* spp.: **A–C:** *C. bicolor*. **D–G:** *C. boianotum*. **H–J:** *C. bulbopella*. **K–M:** *C. chenopoderis*. **N–P:** *C. chinensis*. **Q–S:** *C. confusus*.

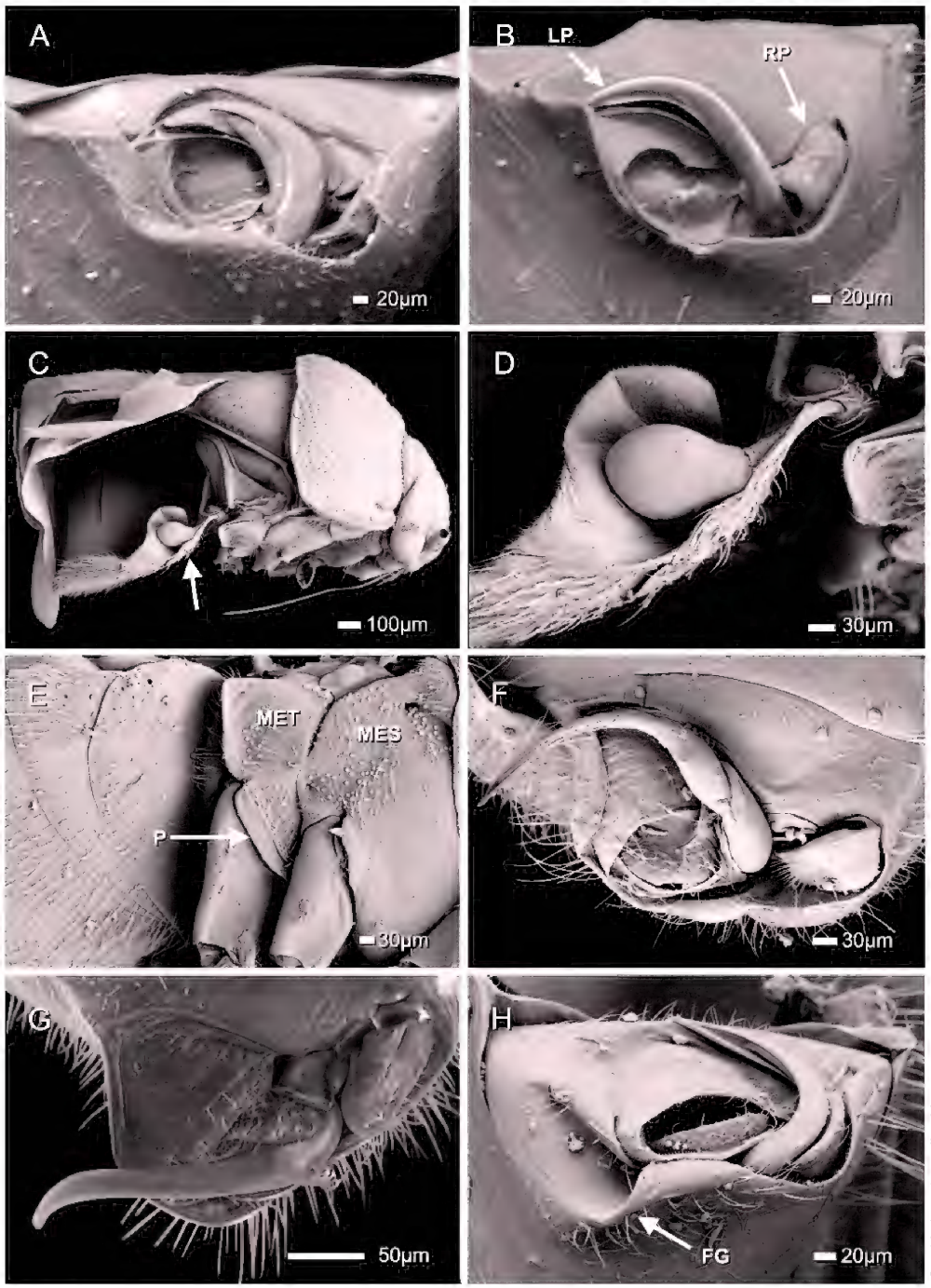
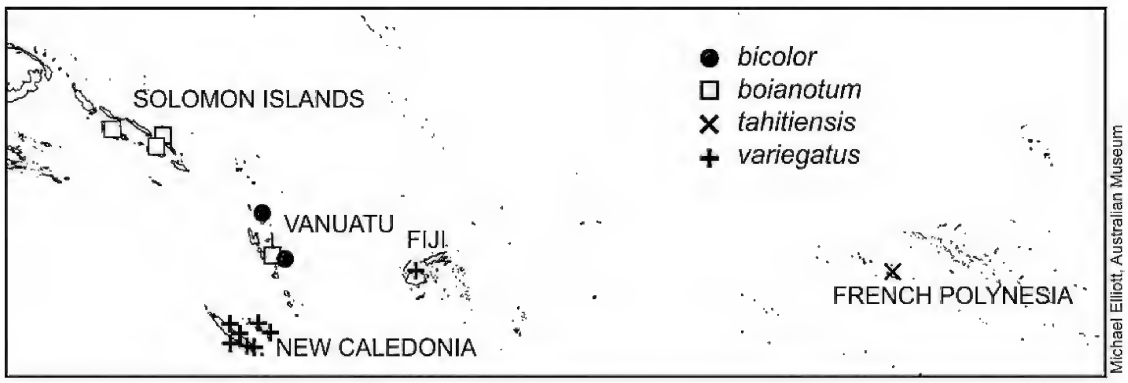


Fig. 8. Scanning electron micrographs: **A.** *C. bicolor* ♂ genitalia, posterior view. **B.** *C. boianotum* ♂ genitalia, posterior view. **C–F:** *C. bulbopella*: **C.** ♀ dorsolateral view, right hindwing and hemelytron removed to expose paragenital "cup and bulb" (arrow). **D.** Detail of "cup and bulb". **E.** ♀ thorax and abdomen, right lateral view. **F.** ♂ genitalia, dorsal view. **G.** *C. carinatus* ♂ genitalia, dorsal view. **H.** *C. chenopoderis* ♂ genitalia, posterior view. FG = folded groove on pygophore. LP = left paramere, MES = mesepimeron, MET = metepimeron P = peritreme, RP = right paramere.



Map 1. Distribution map of *C. bicolor*, *boianotum*, *tahitiensis*, and *variegatus*.

Gagne, *Macaranga* sp. (Euphorbiaceae) (AMNH_PBI 00041470) (BPBM type# 16724) (BPBM).

DIAGNOSIS: Recognized by the following characters: flat and broad shape (fig. 4); posterior margin of pygophore with shallow folded groove to left (fig. 8A); short left paramere (figs. 7A, 8A); small, triangular right paramere with rounded apex (fig. 7B–C); most specimens dark brown with the anterior half of the hemelytra pale. *C. bicolor* is similar in appearance to *variegatus*, *chenopoderis*, *monotocopsis*, and *pilbarensis* but is noticeably wider across the hemelytra, has a slightly flatter pronotum, different coloration, and a unique right paramere shape.

DESCRIPTION: COLORATION (figs. 4, 6): Orange-brown to dark chocolate brown. Head: Mostly yellow- to orange-brown; frons with dark brown vittae; paired transverse depressions and midpoint of vertex dark brown, in some cases these markings join together as a single band; vertex sometimes with yellow piping along posterior margin; clypeus with two submedial, vertical brown stripes; mandibular and maxillary plates yellow to orange, buccula brown to orange with yellow ventral margin; labrum dark brown, labium orange-brown, brown apically. Antennae: AI yellow, apex sometimes with faint brown ring; AII mostly pale with dark brown annulation; AIII and AIV dark brown. Thorax: Pronotal collar yellow, anterior margin brown; pronotum orange-brown to dark brown with faint medial stripe, callar region sometimes mottled with faint, coalescing brown spots, anterolateral corners and humeral angles generally paler; mesoscutum yellow- to orange-brown; scutellum yellow- or orange-brown to dark brown, sometimes with a faint brown medial stripe, apex generally cream colored; thoracic pleura yellow- or orange-brown with posterior margins of each sclerite yellowed. Hemelytra: Mostly dark brown with the anterior half of the hemelytra sometimes pale, or mostly yellow to orange-brown with claval commissure dark brown and corium with faint symmetrical dark markings; the clavus always darker, sometimes somewhat reddened at costal fracture and apex of cuneus. Legs: Yellow-orange; metafemur with 7–8 diagonal brown stripes. Abdomen: yellow to brown. SURFACE AND VESTITURE (figs. 4, 6): Head and pronotum shallowly punctate; propleuron, metepimeron, scutellum and hemelytra impunctate; dorsum with sparse distribution of short, white, decumbent setae. STRUCTURE: (figs. 4, 6) Head: Frons broadly tumescent medially; vertex with two slightly raised tubercles adjacent to eyes, bordered posteriorly by shallow depressions, posterior margin somewhat carinate, slightly rounded. Thorax: Pronotum very broad, weakly convex, margins carinate; anterolateral margins only weakly upturned, submarginal region of humeral angles weakly excavate, callar region undifferentiated; proepisternum unilobed; posterior margin of metepimeron truncate; metanotum not prominent and flared. Hemelytra: Costal margin thin and platelike, flared along entire length and weakly sinuate. Legs: Metatibial spines thin and short. Abdomen: When

viewed laterally, posterior margin of abdominal sternite II not sharply angular. MALE GENITALIA (figs. 7A–C, 8A): Right paramere somewhat triangular, curved, and rounded (fig. 7B–C); left paramere sickle-shaped, with a broad gutter on inner surface (figs. 7A; 8A); posterior margin of pygophore with shallow groove on left formed by folding of the pygophore margin (fig. 8A). FEMALE PARAGENITALIA: No visible external paragenitalia.

ETYMOLOGY: Named for the coloration typical of most specimens.

HOST: This species has been collected on *Macaranga* and *Mallotus* spp. (Euphorbiaceae), as well as from mango blossoms (Anacaridaceae).

DISTRIBUTION: Known only from Vanuatu (map 1).

PARATYPES: **VANUATU: Shefa:** Shepherd Group: Tongariki Island, 16.8°S 168.5°E, 0–300 m, 29 Aug 1979, W.C. Gagne, *Macaranga* sp. (Euphorbiaceae), 2♂ (AMNH_PBI 00041471, AMNH_PBI 00041472), 2♀ (AMNH_PBI 00041473, AMNH_PBI 00041474) (BPBM). **Torba:** Banks Islands: Vanoua Lava Island, 2 km W of Sola, 13.83333°S 167.4667°E, 0–30 m, 17 Sep 1979, G.A. Samuelson, *Mallotus* sp. (Euphorbiaceae), 6♂ (AMNH_PBI 00042134–AMNH_PBI 00042139), 1♀ (AMNH_PBI 00041475) (BPBM).

OTHER SPECIMENS EXAMINED: **VANUATU: Shefa:** Shepherd Group: Tongariki Island, 16.8°S 168.5°E, 0–300 m, 29 Aug 1979, W.C. Gagne, *Mangifera* sp. (Anacardiaceae), 2 nymphs (AMNH_PBI 00042140, AMNH_PBI 00042141) (BPBM).

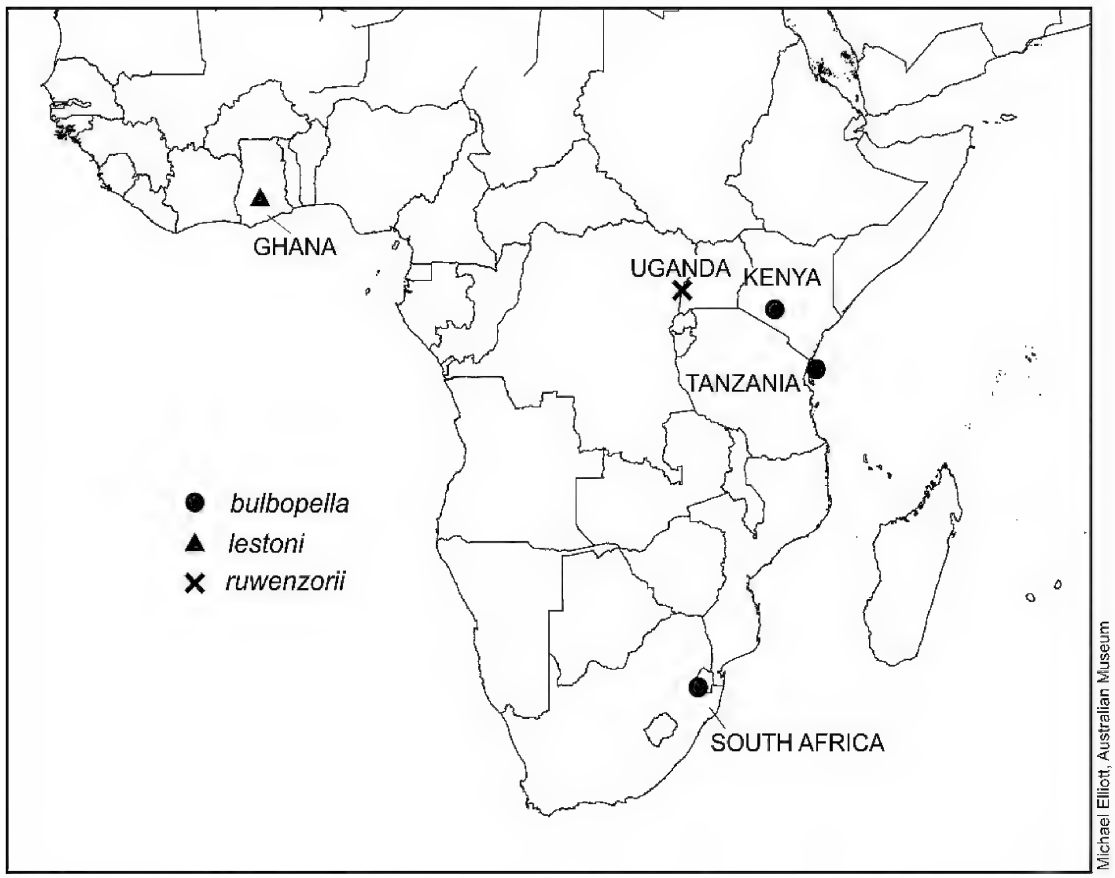
Coridromius boianotum, new species
Figures 4, 6, 7D–G, 8B, map 1

HOLOTYPE: Male: **SOLOMON ISLANDS: Malaita:** Andalimu-Ngarafata (SW Fiu River), 8.71666°S 160.68333°E, 1 m, 19 Sep 1957, J.L. Gressitt, *Acalypha* sp. (Euphorbiaceae) (AMNH_PBI 00041490) (BPBM type# 16725) (BPBM).

DIAGNOSIS: Distinguished by the flared anterolateral margins of the pronotum (fig. 4). *C. boianotum* shares similar coloration with *bulbopella* and *ruwenzorii*, but can be readily distinguished from these by its unilobate proepisternum and lack of visible paragenitalia. It is also similar to *carinatus*, though with much less pronounced anterolateral projections of the pronotum. Both species have similar coloration and texture, a weakly curved left paramere, and a lack of any groove, fold, or suture along the posterior margin of the pygophore.

DESCRIPTION: COLORATION (figs. 4, 6): Head: Pale yellow-orange; frons without vittae; labium pale, brown apically. Antenna: Pale, apex of AII slightly brown. Thorax and abdomen: Concolorous yellow-orange, paler ventrally; scutellum with two prominent lateral brown spots. Legs: Concolorous yellow-orange, metafemur without dark diagonal stripes. SURFACE AND VESTITURE (figs. 4, 6): Head smooth and impunctate; pronotum and scutellum glossy with deep, widely spaced punctation; hemelytra, propleuron, and metepimeron impunctate; setae on dorsum short, white, and simple, most setae knocked off examined specimens. STRUCTURE: (figs. 4, 6) Head: Frons and vertex forming a confluent broad medial tumescence, becoming shallowly depressed adjacent to eyes; vertex without tubercles adjacent to eyes; posterior margin of head medially rounded, not carinate, without transverse depressions adjacent to eyes. Thorax: Pronotum broad, lateral and posterior margins thin and carinate, anterolateral margins strongly flared and lobed, submarginal region of humeral angles weakly excavated, posterior margin weakly upturned, callar region weakly defined; proepisternum unilobed; posterior margin of metepimeron truncate; metanotum not prominent and flared; scutellum swollen. Hemelytra: Costal margin evenly rounded and thinly carinate. Legs: Metatibial spines short and thin. Abdomen: When viewed laterally, abdominal sternite II not angular. MALE GENITALIA (figs. 7D–G, 8B): Right paramere small, broadly triangular (fig. 7E–G); left paramere weakly curved (figs. 7D, 8B); ventral margin of pygophore simple and weakly biconvex, without fold, groove, or mesal suture on left side (fig. 8B). FEMALE PARAGENITALIA: No visible external paragenitalia.

ETYMOLOGY: The epithet *boianotum* is derived from Latin (*boia*, "collar") and



Map 2. Distribution map of *C. bulbopella*, *lestoni*, and *ruwenzorii*.

Greek (*noton*, "back") and reflects the expanded anterolateral projections of the pronotum.

HOST: Known only from the genus *Pipturus* (Urticaceae).

DISTRIBUTION: Known from the Solomon Islands and Vanuatu (map 1).

PARATYPES: **SOLOMON ISLANDS: Guadalcanal:** Roroni, 35 km E. of Honiara, 9.45°S 160.23333°E, 10 m, 08 May 1964, R. Straatman, 1♂ (AMNH_PBI 00041492) (BPBM). Malaita: Auki, 8.767°S 160.7°E, 21 Sep 1957, J.L. Gressitt, *Pipturus* sp. (Urticaceae), 1♀ (AMNH_PBI 00041491) (BPBM). **Western Province: New Georgia Islands:** New Georgia Island, Munda, 8.31666°S 157.25°E, 15 Jul 1959, J.L. Gressitt, 1♂ (AMNH_PBI 00041493), 1♀ (AMNH_PBI 00041494) (BPBM). **VANUATU: Shefa: Epi Island:** Lowekewou, 16.6°S 168.1667°E, 31 Aug 1979, W.C. Gagne, (Urticaceae), 1♀ (AMNH_PBI 00041506) *Pipturus* sp. (Urticaceae), 6♂ (AMNH_PBI 00041495–AMNH_PBI 00041500), 3♀ (AMNH_PBI 00041501–AMNH_PBI 00041503) (BPBM). Vaemali, 16.567°S 168.183°E, 08 Aug 1967, J. & M. Sedlacek, 2♀ (AMNH_PBI 00041504, AMNH_PBI 00041505) (BPBM).

Coridromius bulbopella, new species
Figures 4, 6, 7H–J, 8C–F, map 2

HOLOTYPE: Male: **SOUTH AFRICA: KwaZulu-Natal:** Ngome Forest Station, 27°S 31°E, 1100 m, 05–08 Feb 1996, M. Stiller, *Berkheya bipinnatifida* (Asteraceae) (AMNH_PBI 00186395) (SANC).

DIAGNOSIS: Easily identified by a single twist in the male's left paramere and the "cup and bulb" paragenital structure on the right abdominal laterotergites II and III of both

females and males. *C. bulbopella* is most similar to *ruwenzorii*, however in the latter the "cup and bulb" structure is much reduced.

DESCRIPTION: COLORATION (figs. 4, 6): Head: Concolorous brownish yellow, slightly paler ventrally; vertex without brown vittae. Antenna (fig. 4): Mostly yellow; AI with wide brown subapical band; AII with brown annulation; AIII and AIV brown. Thorax: Pronotal collar yellow; pronotum orange-yellow with pale yellow medial stripe, edges somewhat pale; mesoscutum orange-yellow; scutellum orange-yellow to yellow with two large brown markings; thoracic pleura orange-yellow, becoming yellow along posterior margins. Hemelytra: Mostly yellow- to orange-brown, clavus somewhat darker, becoming more brown along claval commissure and adjacent to scutellum; corium with faint brown transverse chevron pattern; membrane pale brown with darker brown veins. Abdomen: Orange-yellow. Legs: Orange-yellow; metafemur without transverse stripes. SURFACE AND VESTITURE (figs. 4, 6): Head smooth, impunctate, and without setae; pronotum, scutellum, and hemelytra with large punctures; propleuron, metepimeron, and cuneus impunctate; dorsum sparsely covered in short, white, decumbent setae. STRUCTURE (figs. 4, 6, 8E): Head: Frons broadly tumescent; vertex without tubercles adjacent to eyes; posterior margin of head distinctly rounded. Thorax: Pronotum broad and evenly rounded, margins thinly carinate, anterolateral margins adjacent to callar region depressed, submarginal region of humeral angles weakly excavated, posterior margin weakly upturned, callar region weakly developed; proepisternum bilobed; posterior margin of metepimeron truncate (fig. 8E); metanotum prominent and flared; scutellum not greatly swollen. Hemelytra: Embolium flared posteriorly, carinate, cuneus small. Legs: Metatibial spines long and thick. Abdomen: When viewed from the side, posterior margin of abdominal sternite II not sharply angular (fig. 8E). MALE GENITALIA (figs: 7H–J, 8F): Right paramere boot-shaped (figs. 7I–J, 8F); left paramere tightly coiled once basally, very long, thin and scythe-shaped, evenly curved and slightly twisted along its axis to apex (figs. 7H, 8F); posterior margin of pygophore weakly biconvex, without fold, groove, mesal suture, or ventral apical process (fig. 8F). FEMALE PARAGENITALIA (fig. 8C–D): Right laterotergites II and III modified into cup-and-bulb–shaped structure, also present in males.

ETYMOLOGY: The species name *bulbopella* combines the Latin *bulbus* ("bulb") with the Greek *pella* ("wooden cup"), and refers to the cup-and-bulb–shaped paragenital structure of this species.

REMARKS: *C. bulbopella* is the only species of *Coridromius* in which external paragenitalic structures are found in both sexes. Nothing is known of the function of these unusual structures.

HOST: Collected on *Berkheya bipinnatifida* (Asteraceae).

DISTRIBUTION: Found in southeastern Africa (map 2).

PARATYPES: **SOUTH AFRICA: KwaZulu-Natal:** Ngome Forest Station, 27°S 31°E, 1100 m, 05–08 Feb 1996, M. Stiller, *Berkheya bipinnatifida* (Asteraceae), 2♂ (AMNH_PBI 00041476, AMNH_PBI 00186396), 4♀ (AMNH_PBI 00186397–AMNH_PBI 00186400) (SANC).

OTHER SPECIMENS EXAMINED: **KENYA: Central Province:** Limuru, 1.1°S 36.65°E, 2240 m, Sep 1954, Unknown, 10♂ (AMNH_PBI 00041480–AMNH_PBI 00041489), 3♀ (AMNH_PBI 00041477–AMNH_PBI 00041479) (BPBM). **TANZANIA: East Usambara**, Amani, 5.36667°S 39.71667°E, 1000 m, 06 Feb 1977, H. Enghoff, O. Lomholdt & O. Martin, 1♀ (AMNH_PBI 00000261) (ZMUC).

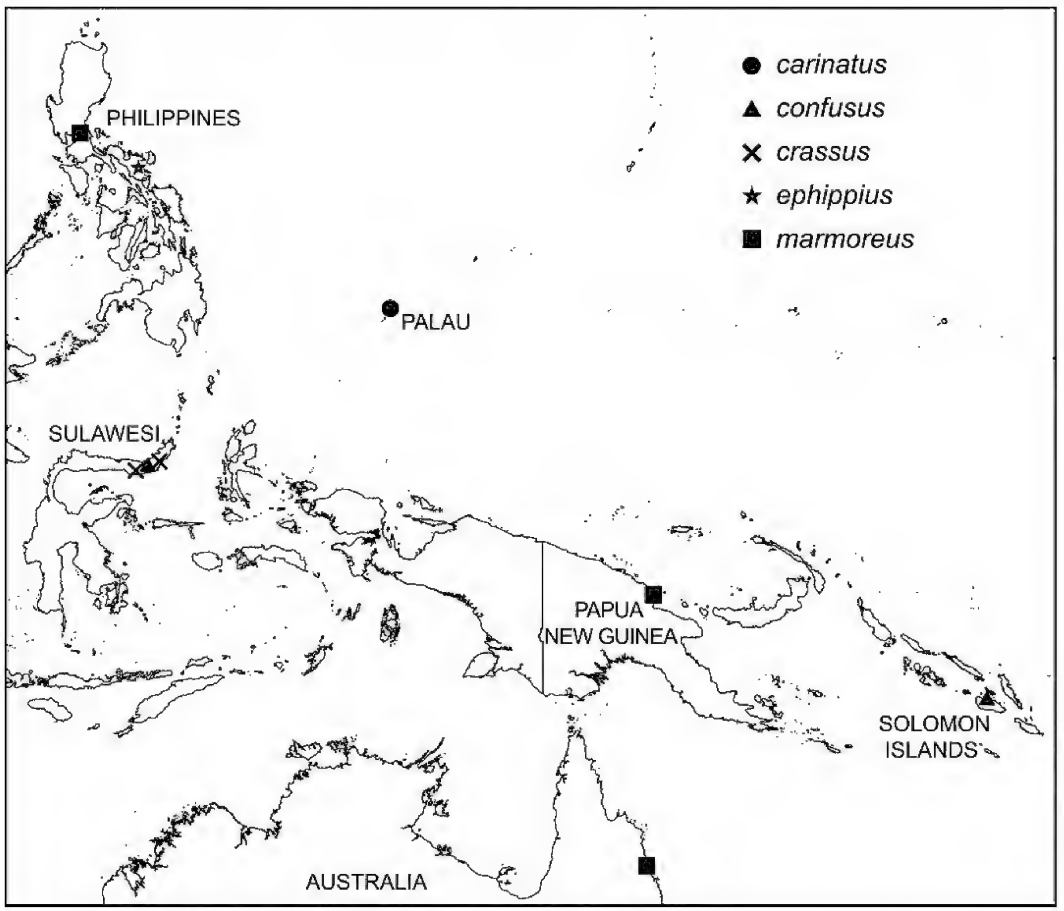
Coridromius carinatus (Carvalho 1956), new combination

Figures 4, 6, 8G, map 3

Coridromoides carinatus Carvalho, 1956: 54–55 (n. sp.).

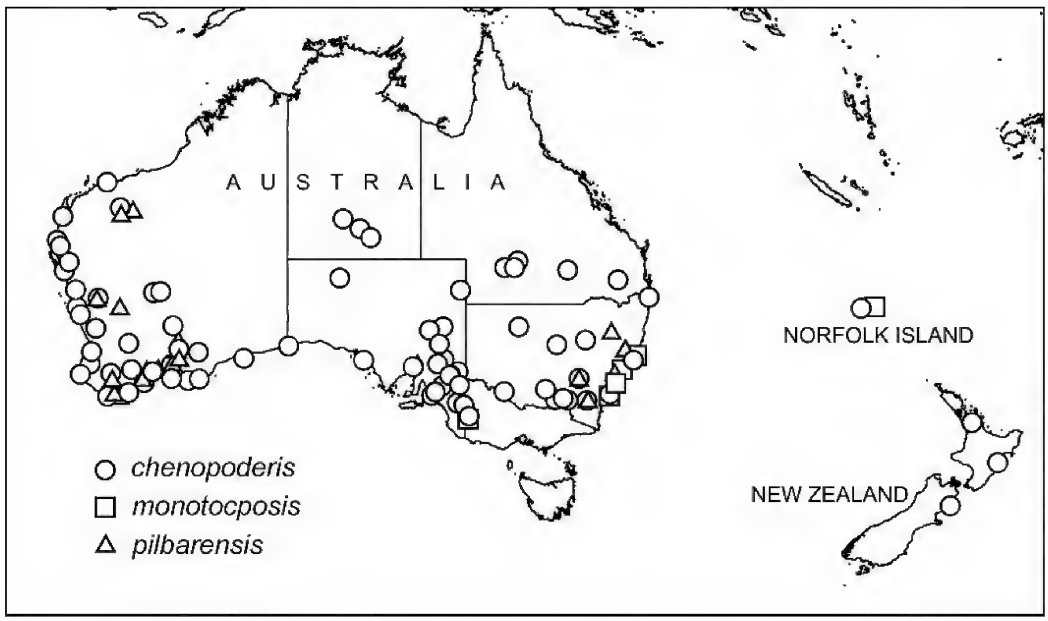
DIAGNOSIS: Recognized by the swollen callar region, anterior projections of the humeral angles (fig. 4) and stylate eyes (figs. 4, 6). *C. carinatus* is most similar to *boianotum*, with both species sharing similar pronotal projections, coloration, texture, and male genitalia. Female unknown.

REDESCRIPTION: COLORATION (figs. 4, 6): Head: Pale brownish-orange; frons without brown vittae. Antenna: Pale yellow-



Map 3. Distribution map of *C. carinatus*, *confusus*, *crassus*, *ephippius*, and *marmoreus*.

orange, apex of AI and AII, base of AIII, and all of AIV slightly brown. Thorax: Mostly brownish-orange, paler ventrally; pronotal collar yellowish orange, brown laterally; pronotum brownish orange with pale medial stripe bordered by darker brownish-orange fields; mesoscutum dark brownish orange; scutellum brownish orange with two broad lateral brown spots. Hemelytra: Somewhat translucent brownish yellow, becoming darker orange on clavus, especially along scutellar margin. Legs: Yellowish orange, metafemur with five or six light brown diagonal stripes. Abdomen: Brownish yellow. SURFACE AND VESTITURE (figs. 4, 6): Head and scutellum smooth, glossy and impunctate; pronotum glossy and highly sculptured with deep, irregular punctures; propleuron, metepimeron, and hemelytra impunctate; head and dorsum clothed in short, white, decumbent setae. STRUCTURE (figs. 4, 6): Head: Wide, eyes stylate; frons broadly tumescent medially; vertex without paired tumescences adjacent to eyes; posterior margin of head strongly rounded medially and carinate along lateral margins. Thorax: Pronotum highly sculptured and campanulate, anterolateral margins thin and carinate, projecting forward as distinct lobes, callar region greatly swollen, posterior margin flared upward and strongly carinate, humeral angles broadly rounded; proepisternum unilobed; posterior margin of metepimeron truncate; scutellum swollen. Hemelytra: Costal margin straight and narrowly carinate; cuneus narrow and long. Legs: Metatibial spines short and thin. Abdomen: When viewed laterally, posterior margin of abdominal sternite II not angular. MALE GENITALIA (fig. 8G): Right para-



Map 4. Distribution map of *C. chenopoderis*, *monotocopsis* and *pilbarensis*. (Not shown on map: *C. chenopoderis* is also found in Hawaii and parts of southern North America.)

mere simple and rounded; left paramere thin and weakly curved; posterior margin of pygophore without groove, fold, or mesal suture. FEMALE PARAGENITALIA: Unknown.

REMARKS: Although the pronotal shape and stylate eyes of *carinatus* are unique to this species, all other characters—including the male genitalia—are typical of *Coridromius*. We do not find that this species differs enough from *Coridromius* to justify its own genus, and therefore synonymize *Coridromoides* as a junior synonym of *Coridromius*.

HOST: Unknown.

DISTRIBUTION: Known only from a single specimen from Palau (map 3).

HOLOTYPE: Male: **PALAU:** Northwest Auluptagel Island, Pacific Science Building, 7.30833°N 134.4778°E, 25 m, 13 Dec 1952, J.L. Gressitt, Light Trap (AMNH_PBI 00185355) (USNM).

Coridromius chenopoderis, new species
Figures 2B–C, 4, 6, 7K–M, 8H, map 4

HOLOTYPE: Male: **AUSTRALIA: Western Australia:** 13.2 km N of jct of Agana Kalbarri Rd and Brand Hiway, Galena River Bridge, 27.82917°S 114.6873°E, 190 m, 24 Oct 2004, Cassis, Wall, Weirauch, Symonds, *Atriplex amnicola* Paul G. Wilson (Chenopodiaceae), det. Perth staff PERTH6988431 (AMNH_PBI 00015692) (AM).

DIAGNOSIS: Recognized by the following combination of characters: proepisternum unilobed; metanotum not prominently flared; posterior margin of pygophore biconvex, with prominent fold on left side forming deep U-shaped groove, without small apophysis on right margin of groove. *C. chenopoderis*, *monotocopsis*, *pilbarensis*, and *variegatus* are all very similar and often difficult to tell apart. Of the four species, *chenopoderis* exhibits the most phenotypic variation in both size and coloration (e.g., fig. 2B–C) and has the widest variety of known host plants of all *Coridromius*. It has a somewhat narrower body shape and is typically smaller than the others, though size ranges do overlap. Males can be distinguished from the other species by the relatively shorter left paramere, the much deeper U-shaped fold on the posterior margin of the pygophore, by the lack of a small apical process on the right margin of this fold (found only in *pilbarensis*) and by the lack of a small rounded lobe on the posterior margin of the metepimeron (as in fig. 14B) as found in *variegatus*.

DESCRIPTION: COLORATION (figs. 2B–C, 4, 6): Extremely variable, ranging from light tan or olive to brown or black with brown markings (fig. 2B–C). Head: Mostly brownish yellow to orange-brown with dark brown vittae on frons; lateral margins bordering eyes and posterior margin of vertex yellow; paired tubercles on vertex yellow, bordered posteriorly with dark brown markings, sometimes merging with dark brown spot in middle of vertex; clypeus with irregular median and lateral dark brown markings; mandibular and maxillary plates darkened along ventral margins; buccula pale; labrum light brown; labium yellow, brown apically; in some specimens head mostly dark brown. Antenna: AI yellow-brown to orange-brown with thin brown apical and basal annulations; AII yellow-brown to orange-brown, sometimes slightly brown apically; AIII and AIV orange-brown to brown. Thorax: Pronotal collar yellow with brown anterior and posterior margins, uniformly dark brown in darker specimens; pronotum light tan, olive, brown, or dark brown, often with pale medial stripe, usually with irregular dark brown or black markings on callar region; mesoscutum orange-brown to dark brown; scutellum ranging from mostly dark brown with yellow corners to mostly light brown or tan with darker brown markings; thoracic pleura light brown to dark brown, often with yellow markings; mesopleuron brown to black ventrally. Hemelytra: Light tan or olive to brown or black, sometimes with a brown chevron on corium, sometimes darker along claval commissure; membrane faint brown with darker veins. Legs: Coxae yellow to brown; pro- and mesofemora yellow to dark brown, sometimes with faint, subapical brown markings; hind femur yellow to orange-brown with 8 or 9 dark brown diagonal stripes on outer surface; tibiae yellow to brown; tarsi brown apically. Abdomen: Yellow to dark brown or black, sometimes with lateral brown markings around spiracles, males sometimes with reddish markings on genital capsule. SURFACE AND VESTITURE (figs. 4, 6): Head glossy and shallowly punctate; pronotum shallowly punctate; propleuron, metepimeron, scutellum, and hemelytra impunctate; head and dorsum with sparse distribution of short, simple, white, decumbent setae. STRUCTURE (figs. 4, 6): Head: Wide; frons broadly tumescent medially; paired tubercles adjacent to eyes; transverse depressions above tubercles shallow; posterior margin of head slightly rounded medially but otherwise flat. Thorax: Pronotum broad and weakly rounded, margins thinly carinate, anterolateral margins weakly upturned, posterior margin weakly medially cleft, submarginal region of humeral angles weakly excavated; proepisternum unilobed; posterior margin of metepimeron truncate; metanotum not prominent and flared. Hemelytra: Embolium thin and evenly rounded, nearly straight. Legs: Metatibial spines thick. Abdomen: When viewed laterally, posterior margin of abdominal sternite II not distinctly angular. MALE GENITALIA (figs. 7K–M, 8H): Right paramere triangular and elongate (figs. 7L–M); left paramere sickle-shaped, apex acute (figs. 7K, 8H); posterior margin of pygophore biconvex, with distinct fold on left forming a deep U-shaped groove (fig. 8H). FEMALE PARAGENITALIA: No visible external paragenitalia.

ETYMOLOGY: This name was chosen to reflect this species' preference for chenopodiaceous plants.

HOSTS: This species is known from several plant families but is most commonly collected on chenopods (Chenopodiaceae).

DISTRIBUTION: The most widely distributed of the Australian species, *chenopoderis* is found throughout the country. It has also been collected in New Zealand and Norfolk Island, where it has probably been introduced (map 4). This species has also recently been discovered in North America by Michael D. Schwartz; it has been collected off chenopods in Mexico, Arizona, New Mexico, southern California, Florida, and Texas. Additionally, specimens of *Coridromius* have been collected from Hawaii and previously identified as *variegatus*. Examination of these specimens, collected from *Chenopodium murale*, confirms that they are in fact *chenopoderis*.

PARATYPES: **AUSTRALIA: New South Wales:** 2.9 km W of Nyngan, 31.55001°S 147.1553°E, 202 m, 18 Oct 2001, Cassis, Silveira, Wall, *Einadia nutans subsp. nutans* (R.Br.) A. J. Scott (Chenopodiaceae), det.

NSW staff NSW658277, 7♂ (AMNH_PBI 00015526–AMNH_PBI 00015532), 3♀ (AMNH_PBI 00012117–AMNH_PBI 00012119) *Rhagodia spinescens* R.Br. (Chenopodiaceae), det. NSW staff NSW658274, 1♂ (AMNH_PBI 00012105), 5♀ (AMNH_PBI 00012106–AMNH_PBI 00012110) (AM). 42 km SW Bourke toward Louth, 30.33334°S 144.5833°E, 100 m, 27 Oct 1995, Schuh and Cassis, *Flindersia maculosa* (Lindley) Benth. (Rutaceae), det. P. H. Weston 1996 NSW395939, 1♂ (AMNH_PBI 00002613), 5♀ (AMNH_PBI 00002614–AMNH_PBI 00002618) (AMNH). 9.5 km E of Balranald on Sturt Hwy, 34.702°S 143.615°E, 20 Oct 1996, Schuh and Cassis, *Nitraria billardierei* DC. (Zygophyllaceae), det. Perth staff PERTH05095247, 16♂ (AMNH_PBI 00006354–AMNH_PBI 00006369), 7♀ (AMNH_PBI 00006370–AMNH_PBI 00006376) *Nitraria billardierei* DC. (Zygophyllaceae), det. Perth staff PERTH05095247, 1♂ (AMNH_PBI 00123417) (AM). *Atriplex nummularia omissa* Aellen (Chenopodiaceae), det. Perth staff PERTH-05054680, 2♂ (AMNH_PBI 00002699, AMNH_PBI 00002700), 1♀ (AMNH_PBI 00002701) (AMNH). Comerong Island Nature Reserve, nr. Nowra, Seven Mile Beach, on dunes, 34.882°S 150.735°E, 09 Apr 2006, C. Symonds, (Chenopodiaceae), 5♂ (AMNH_PBI 00012442–AMNH_PBI 00012446), 3♀ (AMNH_PBI 00012447–AMNH_PBI 00012449) (AM). Myall Lakes NP, 32.57916°S 152.29083°E, 16 Nov 1996, L. Wilkie, *Acacia longifolia* (Mimosaceae), 2♂ (AMNH_PBI 00012401, AMNH_PBI 00012402) (AM). Warrumbungle National Park, Wambelong Campground, 31.21666°S 149.08333°E, 550 m, 25 Oct 1995, Schuh and Cassis, *Amyema cambagei* (Blakely) Danser (Loranthaceae), det. B.M. Wiecek 1996 NSW395934, 1♀ (AMNH_PBI 00002731) (AMNH). Northern Territory: 143.3 km NW of Bond Springs on Tanami Rd, 23.03333°S 132.722°E, 573 m, 22 Oct 2001, Cassis, Schuh, Schwartz, Silveira, Wall, *Rhagodia spinescens* R.Br. (Chenopodiaceae), det. NSW staff NSW658306, 2♂ (AMNH_PBI 00012120, AMNH_PBI 00012121), 1♀ (AMNH_PBI 00012122) (AM). **Queensland:** 45 km N of Quilpie, 26.3423°S 144.3078°E, 280 m, 02 Nov 1998, Schuh, Cassis, Silveira, *Muehlenbeckia florulenta* Meissner (Polygonaceae), det. NSW staff NSW427471, 2♂ (AMNH_PBI 00002517, AMNH_PBI 00002518), 2♀ (AMNH_PBI 00002523, AMNH_PBI 00002524) (AMNH). 82.6 km NW of Quilpie, 26.3479°S 143.6454°E, 190 m, 03 Nov 1998, Schuh, Cassis, Silveira, *Frankenia* sp. (Frankeniaceae), det. NSW staff NSW427347, 1♀ (AMNH_PBI 00012386) (AM). 9 km WSW of Adavale, 25.91094°S 144.5143°E, 270 m, 02 Nov 1998, Schuh, Cassis, Silveira, *Hakea leucoptera* R. Br. (Proteaceae), det. NSW staff NSW427661, 8♂ (AMNH_PBI 00006203–AMNH_PBI 00006210), 8♀ (AMNH_PBI 00006211–AMNH_PBI 00006214, AMNH_PBI 00006280–AMNH_PBI 00006283) (AM). *Hakea leucoptera* R. Br. (Proteaceae), det. NSW staff NSW427661, 8♂ (AMNH_PBI 00003054–AMNH_PBI 00003061), 11♀ (AMNH_PBI 00002751, AMNH_PBI 00003062–AMNH_PBI 00003071) (AMNH). 9.6 km W of Mitchell, 26.49202°S 147.8728°E, 430 m, 31 Oct 1998, Schuh, Cassis, Silveira, 2♂ (AMNH_PBI 00012382, AMNH_PBI 00012383), 1♀ (AMNH_PBI 00012384) (AM). 91 km N of Quilpie, 25.99847°S 144.4098°E, 300 m, 02 Nov 1998, Schuh, Cassis, Silveira, *Amyema quandang var. quandang* (Lindley) Tieghem (Loranthaceae), det. NSW staff NSW427341, 1♀ (AMNH_PBI 00006117) *Hakea leucoptera* (Proteaceae), 13♂ (AMNH_PBI 00006085–AMNH_PBI 00006097), 20♀ (AMNH_PBI 00006098–AMNH_PBI 00006116, AMNH_PBI 00012387) *Hakea leucoptera* R. Br. (Proteaceae), det. NSW staff NSW 427661, 1♂ (AMNH_PBI 00123415), 1♀ (AMNH_PBI 00123420) (AM). *Hakea leucoptera* R. Br. (Proteaceae) NSW 427661, 13♂ (AMNH_PBI 00003175–AMNH_PBI 00003187), 27♀ (AMNH_PBI 00003188–AMNH_PBI 00003214) (AMNH). **South Australia:** 11.5 km NE of Wooltana Homestead, 30.33726°S 139.4934°E, 180 m, 06 Nov 1998, Schuh, Cassis, Silveira, 2♂ (AMNH_PBI 00012388, AMNH_PBI 00012389), 3♀ (AMNH_PBI 00012390–AMNH_PBI 00012392) (AM). 12.5 km E of Martins Well, 31.50001°S 139.2276°E, 162 m, 09 Nov 2001, Cassis, Schuh, Schwartz, *Acacia oswaldii* F.Muell. (Fabaceae), det. NSW staff NSW666370, 3♂ (AMNH_PBI 00012111–AMNH_PBI 00012113), 5♀ (AMNH_PBI 00012114–AMNH_PBI 00012116) (AM). 15 km S of Bews, 35.48474°S 140.4332°E, 130 m, 08 Nov 1998, Schuh, Cassis, Silveira, Light Trap, 1♂ (AMNH_PBI 00123407)

(AM). 17 km E of Nepebunna, Gammon Ranges National Park, 30.57312°S 139.1273°E, 480 m, 07 Nov 1998, Schuh, Cassis, Silveira, *Rhagodia parabolica* R. Br. (Chenopodiaceae), 13♂ (AMNH_PBI 00006284–AMNH_PBI 00006296), 20♀ (AMNH_PBI 00006297–AMNH_PBI 00006316) *Rhagodia parabolica* R. Br. (Chenopodiaceae), 1♂ (AMNH_PBI 00123416) (AM). 17.6 km S of Innamincka, 27.88068°S 140.6712°E, 130 m, 06 Nov 1998, Schuh, Cassis, Silveira, *Chenopodium auricomum* Lindley (Chenopodiaceae), det. NSW staff, 42♂ (AMNH_PBI 00006268–AMNH_PBI 00006279, AMNH_PBI 00006460–AMNH_PBI 00006474, AMNH_PBI 00012039–AMNH_PBI 00012053), 34♀ (AMNH_PBI 00006317–AMNH_PBI 00006350) *Teucrium racemosum* R. Br. (Lamiaceae), det. NSW staff NSW427991, 1♂ (AMNH_PBI 00012055) *Muehlenbeckia florulenta* Meissner (Polygonaceae), det. NSW staff NSW427467, 3♂ (AMNH_PBI 00012054, AMNH_PBI 00012374–AMNH_PBI 00012375), 7♀ (AMNH_PBI 00012376–AMNH_PBI 00012381, AMNH_PBI 00012393) (AM). 20 km W of Nepabunna, Mt. Serle, 30.55365°S 138.8304°E, 630 m, 07 Nov 1998, Schuh, Cassis, Silveira, 1♀ (AMNH_PBI 00012385) (AM). 41.5 km NW of Morgan, 33.63335°S 139.9167°E, 150 m, 01 Nov 1995, Schuh, Cassis, and Gross, *Exocarpos aphyllus* R. Br. (Santalaceae), det. B.M. Wiecek 1996 NSW395968, 5♂ (AMNH_PBI 00002630–AMNH_PBI 00002634), 6♀ (AMNH_PBI 00002635–AMNH_PBI 00002640) (AMNH). 5 km N Yunta toward Arkaroola, 32.53334°S 139.55°E, 250 m, 29 Oct 1995, Schuh and Cassis, undetermined sp. (Chenopodiaceae), det. R.T. Schuh NSW395955, 6♂ (AMNH_PBI 00002465–AMNH_PBI 00002470), 9♀ (AMNH_PBI 00002752–AMNH_PBI 00002760) (AMNH). 5.4 km N of Yunta, 32.53804°S 139.5598°E, 300 m, 08 Nov 1996, Schuh and Cassis, *Acacia* sp. (Fabaceae), 4♂ (AMNH_PBI 00006183–AMNH_PBI 00006186), 16♀ (AMNH_PBI 00006187–AMNH_PBI 00006202) (AM). 51 km NW of Morgan, 33.58334°S 140°E, 150 m, 01 Nov 1995, Schuh, Cassis, and Gross, Light Trap, 2♂ (AMNH_PBI 00012403, AMNH_PBI 00123404), 2♀ (AMNH_PBI 00123405, AMNH_PBI 00123406) (AM). *Eremophila mitchellii* Benth. (Myoporaceae), det. J. Everett 1996 NSW395936, 2♂ (AMNH_PBI00002713, AMNH_PBI 00002714), 2♀ (AMNH_PBI 00002715, AMNH_PBI 00002716), Light Trap, 4♂ (AMNH_PBI 00002709–AMNH_PBI 00002712), 2♀ (AMNH_PBI 00002641, AMNH_PBI 00002642) (AMNH). 52 km SW of Yunta, 32.83335°S 139.1°E, 500 m, 30 Oct 1995, Schuh and Cassis, 24♂ (AMNH_PBI 00006383–AMNH_PBI 00006406), 15♀ (AMNH_PBI 00006407–AMNH_PBI 00006421) (AM). 58♂ (AMNH_PBI 00002487–AMNH_PBI 00002499, AMNH_PBI 00003004–AMNH_PBI 00003017, AMNH_PBI 00003072–AMNH_PBI 00003102), 43♀ (AMNH_PBI 00002500–AMNH_PBI 00002516, AMNH_PBI 00003018–AMNH_PBI 00003035, AMNH_PBI 00003103–AMNH_PBI 00003110) (AMNH). 6 km N of Sturt Hiway, Mt. Mary Road, 34.33334°S 139.4167°E, 250 m, 01 Nov 1995, Schuh, Cassis, and Gross, *Nitraria billardierei* DC. (Nitrariaceae), det. R.G. Coveny 1996 NSW395966, 3♂ (AMNH_PBI 00006171–AMNH_PBI 00006173), 5♀ (AMNH_PBI 00006174–AMNH_PBI 00006178) (AM). *Nitraria billardierei* DC. (Nitrariaceae), det. R.G. Coveny 1996 NSW395966, 5♂ (AMNH_PBI 00002619–AMNH_PBI 00002623), 6♀ (AMNH_PBI 00002624–AMNH_PBI 00002629) (AMNH). 66–69 km NW of Morgan, Cane Grass, 33.58334°S 140.0333°E, 150 m, 02 Nov 1995, Schuh, Cassis, and Gross, undetermined sp., 22♂ (AMNH_PBI 00002658–AMNH_PBI 00002679), 19♀ (AMNH_PBI 00002680–AMNH_PBI 00002698) (AMNH). 75 km NW of Morgan, 5 km N Cane Grass, 33.53334°S 140.05°E, 100 m, 02 Nov 1995, Schuh, Cassis, and Gross, Light Trap, 1♀ (AMNH_PBI 00123408) (AM). 96 km NW of Morgan, Pine Valley Stn, 33.31667°S 140.2°E, 150 m, 02 Nov 1995, Schuh, Cassis, and Gross, *Exocarpos aphyllus* R. Br. (Santalaceae), det. B.M. Wiecek 1996 NSW395968, 1♀ (AMNH_PBI 00002702) (AMNH). Brookfield Cons. Pk., 34.22°S 139.27°E, 25 Nov 1992, I. D. Naumann & J. C. Cardale, 2♂ (AMNH_PBI 00006179, AMNH_PBI 00006180), 2♀ (AMNH_PBI 00006181, AMNH_PBI 00006182) (AM). Nullabor National Park 5 km E of WA border, 31.63716°S 129.0346°E, 50 m, 22 Oct 1996, Schuh and Cassis, *Myoporum insulare ?* R. Br. (Myoporaceae), det. Perth staff PERTH05095239, 4♂ (AMNH_PBI 00012394–AMNH_PBI 00012397), 2♀ (AMNH_PBI 00012398, AMNH_PBI 00012399) (AM). Scorpion

Springs Cons. Park, 35.60421°S 140.8646°E, 125 m, 10 Nov 1998, Schuh, Cassis, Silveira, *Melaleuca brevifolia* Turcz. (Myrtaceae), det. NSW staff NSW427362, 1♀ (AMNH_PBI 00123400) (AM). Yunta, 32.58°N 139.559°E, 12 Nov 1994, C.N. and A.S. Smithers, 1♀ (AMNH_PBI 00123409) (AM). **Victoria:** Little Desert National Park, 5–6 km W of McDonald Hiway, 36.61668°S 141.1667°E, 150 m, 03 Nov 1995, Schuh and Cassis, *Acacia acinacea* Lindl. (Fabaceae), det. B.J. Conn 1996 NSW 395983, 1♀ (AMNH_PBI 00002643) (AMNH). **Western Australia:** 115.4 km E of Norseman, 32.05143°S 122.9675°E, 600 m, 23 Oct 1996, Schuh and Cassis, *Eremophila ionantha* Diels (Myoporaceae), det. Perth staff PERTH05056152, 2♂ (AMNH_PBI 00002542, AMNH_PBI 00002543) (AMNH). 13.2 km N of jct of Agana Kalbarri Rd and Brand Hiway, Galena River Bridge, 27.82917°S 114.6873°E, 190 m, 24 Oct 2004, Cassis, Wall, Weirauch, Symonds, *Atriplex amnicola* Paul G.Wilson (Chenopodiaceae), det. Perth staff PERTH6988431, 22♂ (AMNH_PBI 00015693–AMNH_PBI 00015714), 12♀ (AMNH_PBI 00015715–AMNH_PBI 00015726) (AM). 15 km S of Lake Grace, 33.2367°S 118.4692°E, 400 m, 07 Dec 1997, Schuh, Cassis, Brailovsky, Asquith, 1♀ (AMNH_PBI 00002548) (AMNH). 2 km E of Nungarin on Rt 50, 31.43596°S 118.2627°E, 330 m, 16 Nov 1999, R.T. Schuh, G. Cassis, & R. Silveira, *Rhagodia preissii preissii* Moq. (Chenopodiaceae), det. Perth staff PERTH05670594, 4♂ (AMNH_PBI 00006450–AMNH_PBI 00006453), 6♀ (AMNH_PBI 00006454–AMNH_PBI 00006459) (AM). 2.5 km W of Brand Hiway (off Red Emperor Rd), Flat Rocks Beach (S of Geraldton), 29.02061°S 114.7863°E, 22 Oct 2004, Cassis, Wall, Weirauch, Symonds, *Rhagodia preissii subsp. obovata* (Moq.) Paul G.Wilson (Chenopodiaceae), det. Perth staff PERTH6989543, 1♂ (AMNH_PBI 00012088), 1♀ (AMNH_PBI 00012089) (AM). 22 km S of Watheroo, 30.43161°S 116.0438°E, 400 m, 02 Nov 1996, Schuh and Cassis, *Halosarcia indica bidens* (Nees) Paul G.Wilson (Chenopodiaceae), det. Perth staff PERTH05236843, 5♂ (AMNH_PBI 00012100–AMNH_PBI 00012104), 2♀ (AMNH_PBI 00012425, AMNH_PBI 00012426) (AM). *Scholtzia capitata* Benth. (Myrtaceae), det. Perth staff PERTH05236622, 8♂ (AMNH_PBI 00002473–AMNH_PBI 00002477, AMNH_PBI 00002601–AMNH_PBI 00002603), 11♀ (AMNH_PBI 00002478–AMNH_PBI 00002484, AMNH_PBI 00002604–AMNH_PBI 00002607) *Halosarcia indica bidens* (Nees) Paul G.Wilson (Chenopodiaceae), det. Perth staff PERTH05236843, 12♂ (AMNH_PBI 00002645–AMNH_PBI 00002656), 1♀ (AMNH_PBI 00002657) (AMNH). 27.6 km N of Coral Bay Rd on Cardabia-Ningaloo Rd, 22.90198°S 113.8167°E, 25 m, 29 Oct 2004, Cassis, Wall, Weirauch, Tatarnic, Symonds, *Salsola tragus subsp. tragus* L. (Chenopodiaceae), det. Field ID, 11♂ (AMNH_PBI 00015622–AMNH_PBI 00015632), 9♀ (AMNH_PBI 00015633–AMNH_PBI 00015641) (AM). 31.3 km N of Ravensthorpe, 33.36519°S 119.8792°E, 500 m, 05 Nov 1996, Schuh and Cassis, 1♂ (AMNH_PBI 00002540), 1♀ (AMNH_PBI 00002541) (AMNH). 31.7 km W of Agnew toward Sandstone, 27.96227°S 120.4277°E, 800 m, 26 Oct 1996, Schuh and Cassis, *Rhagodia preissii* Moq. (Chenopodiaceae), det. Perth staff PERTH05054753, 1♀ (AMNH_PBI 00002526) (AMNH). 39 km NE of King River, 34.78937°S 118.2759°E, 200 m, 06 Nov 1996, Schuh and Cassis, *Agonis parviceps* Schauer (Myrtaceae), det. Perth staff PERTH05236827, 1♂ (AMNH_PBI 00002522) (AMNH). 40 km N of Ravensthorpe, 33.31524°S 119.8151°E, 500 m, 05 Nov 1996, Schuh and Cassis, *Maireana oppositifolia* (F. Muell.) Paul G.Wilson (Chenopodiaceae), det. Perth staff PERTH-05236630, 7♂ (AMNH_PBI 00006129–AMNH_PBI 00006135), 18♀ (AMNH_PBI 00006136–AMNH_PBI 00006153) (AM). 42.5 km N of Kojonup, 33.46391°S 117.0579°E, 400 m, 04 Nov 1996, Schuh and Cassis, *Atriplex amnicola* Paul G.Wilson (Chenopodiaceae), det. Perth staff PERTH-05236835, 2♂ (AMNH_PBI 00012421, AMNH_PBI 00012422), 13♀ (AMNH_PBI 00015773–AMNH_PBI 00015785) (AM). *Atriplex amnicola* Paul G.Wilson (Chenopodiaceae), det. Perth staff PERTH05236835, 6♂ (AMNH_PBI 00002581–AMNH_PBI 00002586), 6♀ (AMNH_PBI 00002587–AMNH_PBI 00002592) (AMNH). *Atriplex amnicola* Paul G.Wilson (Chenopodiaceae), det. Perth staff PERTH 05236835, 4♂ (AMNH_PBI 00191191–AMNH_PBI 00191194),

4♀ (AMNH_PBI 00191195–AMNH_PBI 00191198) (USNM). 43 km N of Norseman, 31.85648°S 121.6414°E, 300 m, 19 Nov 1999, R.T. Schuh, G. Cassis, & R. Silveira, *Olearia muelleri* (Sond.) Benth. (Asteraceae), det. Perth staff PERTH05670691, 8♂ (AMNH_PBI 00002748, AMNH_PBI 00003036–AMNH_PBI 00003042), 13♀ (AMNH_PBI 00002749–AMNH_PBI 00002750, AMNH_PBI 00003043–AMNH_PBI00003053) (AMNH). *Atriplex bunburyana* F. Muell. (Chenopodiaceae), det. Perth staff PERTH05671205, 2♂ (AMNH_PBI 00114226, AMNH_PBI 00114227) (CNC). 46.5 km W of Yalgoo, 28.41302°S 116.2151°E, 600 m, 27 Oct 1996, Schuh and Cassis, *Eremophila forrestii* F. Muell. (Myoporaceae), det. Perth staff PERTH05671205, 1♀ (AMNH_PBI 00012424) (AM). 51 km N of Leeman on Indian Ocean Rd, Beekeepers Nature Reserve, 29.5116°S 114.997°E, 06 Nov 2004, Cassis, Weirauch, Tatarnic, Symonds, *Rhagodia preissii* Moq. (Chenopodiaceae), det. Field ID, 1♂ (AMNH_PBI 00012096), 1♀ (AMNH_PBI 00012097) (AM). *Rhagodia preissii* Moq. (Chenopodiaceae), det. Field ID, 6♂ (AMNH_PBI 00114217–AMNH_PBI 00114222), 3♀ (AMNH_PBI 00114223–AMNH_PBI 00114225) (CNC). 53.9 km N of Kalgoorlie, 30.28882°S 121.2558°E, 600 m, 24 Oct 1996, Schuh and Cassis, 4♂ (AMNH_PBI 00002717–AMNH_PBI 00002720), 1♀ (AMNH_PBI 00002721) (AMNH). 56.6 km W of Yalgoo, 28.42397°S 116.1233°E, 600 m, 27 Oct 1996, Schuh and Cassis, *Melaleuca uncinata* R.Br. (Myrtaceae), det. Perth staff PERTH05120640, 2♀ (AMNH_PBI 00002520, AMNH_PBI 00002521) *Dicrastylis fulva forma fulva* Harv. (Chloanthaceae), det. Perth staff PERTH05120632, 1♂ (AMNH_PBI 00002519) (AMNH). 82.2 km W of Agnew toward Sandstone, 28.01057°S 119.9455°E, 650 m, 26 Oct 1996, Schuh and Cassis, *Alyogyne pinoniana* (Gaudich.) Fryxell (Malvaceae), det. Perth staff PERTH-05056101, 1♂ (AMNH_PBI 00123418), 1♀ (AMNH_PBI 00123419) (AM). Blowholes Rd NW of North West Coastal Hiway, Beagle Hill Area, 24.49068°S 113.4626°E, 20 m, 27 Oct 2004, Cassis, Wall, Weirauch, Tatarnic, Symonds, *Salsola tragus subsp. tragus* L. (Chenopodiaceae), det. Field ID, 1♂ (AMNH_PBI 00012086), 1♀ (AMNH_PBI 00012087) *Enchylaena tomentosa var. tomentosa* R.Br. (Chenopodiaceae), det. Perth staff PERTH6988903, 3♂ (AMNH_PBI 00015490–AMNH_PBI 00015492) (AM). Brand Hiway 55.9 km S of Dongarra Road, 29.62934°S 115.2187°E, 100 m, 31 Oct 1996, Schuh and Cassis, *Scholtzia drummondii* Benth. (Myrtaceae), det. Perth staff PERTH-05120209, 2♂ (AMNH_PBI 00002544, AMNH_PBI 00002545) (AMNH). Burrup Conservation Area, near Karratha, 20.57805°S 116.79472°E, 17 m, 03 Jun 2004, N. Tatarnic and S. Lassau, *Atriplex amnicola* Paul G.Wilson (Chenopodiaceae), det. Perth staff PERTH6988431, 3♂ (AMNH_PBI 00015727–AMNH_PBI 00015729), 6♀ (AMNH_PBI 00015730–AMNH_PBI 00015735) (AM). Cape Arid National Park, Thomas River Campground, 33.8539°S 123.0126°E, 20 m, 24 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Pimelea ferruginea* Labill. (Thymelaeaceae), det. Perth staff05672341, 1♂ (AMNH_PBI 00002546) *Atriplex isatidea* Moq. (Chenopodiaceae), det. Perth staff PERTH05672317, 3♂ (AMNH_PBI 00002740–AMNH_PBI 00002742), 1♀ (AMNH_PBI 00002744) (AMNH). Cape Naturaliste National Park, 33.54034°S 115.0123°E, 50 m, 14 Dec 1997, Schuh, Cassis, Brailovsky, *Rhagodia baccata* (Labill.) Moq. (Chenopodiaceae), det. Perth staff PERTH05055318, 3♂ (AMNH_PBI 00006422–AMNH_PBI 00006424), 10♀ (AMNH_PBI 00006422–AMNH_PBI 00006431) (AM). *Rhagodia baccata* (Labill.) Moq. (Chenopodiaceae), det. Perth staff PERTH05055318, 28♂ (AMNH_PBI 00003124–AMNH_PBI 00003151), 23♀ (AMNH_PBI 00003152–AMNH_PBI 00003174) (AMNH). Carnarvon, Small Boat Harbour, 24.90044°S 113.6477°E, 26 Oct 2004, Cassis, Wall, Weirauch, Tatarnic, Symonds, *Chenopodium murale* L. (Chenopodiaceae), det. Perth staff PERTH6989047, 1♂ (AMNH_PBI 00012090), 1♀ (AMNH_PBI 00012091) (AM). Conspicuous Beach, Walpole-Nornalup National Park, 10 km E of Nornalup, 35.03725°S 116.8443°E, 30 m, 17 Dec 1997, Schuh, Cassis, Brailovsky, *Rhagodia baccata* (Labill.) Moq. (Chenopodiaceae), det. Perth staff PERTH-05095271, 9♂ (AMNH_PBI 00006154–AMNH_PBI 00006162), 5♀ (AMNH_PBI 00006163–AMNH_PBI 00006167) (AM). 2♀ (AMNH_PBI 00002725, AMNH_PBI 00002726) *Pimelea rosea* R.Br. (Thymelaea-

ceae), det. Perth staff PERTH05099781, 1♀ (AMNH_PBI 00002727) *Olearia axillaris* (DC.) Benth. (Asteraceae), det. Perth staff PERTH05095328, 2♂ (AMNH_PBI 00002722, AMNH_PBI 00002723), 1♀ (AMNH_PBI 00002724) (AMNH). Cosy Corner Beach East, Torbay Sound, W of Albany, 35.06033°S 117.6446°E, 2 m, 01 Dec 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Allocasuarina humilis* (Otto and F. Dietr.) L.A.S. Johnson (Casuarinaceae), det. Perth staff PERTH05671345, 1♀ (AMNH_PBI 00002547) (AMNH). Fitzgerald River National Park, East Mylies Beach, 33.93293°S 120.0031°E, 30 m, 06 Dec 1997, Schuh, Cassis, Brailovsky, Asquith, *Pimelea ferruginea* Labill. (Thymelaeaceae), det. Perth staff PERTH05056403, 1♀ (AMNH_PBI 00002525) (AMNH). Fowlers Camp (at end of Fowlers Camp Rd), Shark Bay World Heritage Area, 26.10801°S 113.6167°E, 24 Oct 2004, Cassis, Wall, Weirauch, Symonds, *Chenopodium murale* L. (Chenopodiaceae), det. Perth staff PERTH-6988016, 70♂ (AMNH_PBI 00015796–AMNH_PBI 00015865), 35♀ (AMNH_PBI 00015866–AMNH_PBI 00015900) *Salsola tragus subsp. tragus* L. (Chenopodiaceae), det. Perth staff PERTH6988024, 1♂ (AMNH_PBI 00012093), 1♀ (AMNH_PBI 00012094) (AM). Gladstone, 25.95428°S 114.2464°E, 04 Nov 2004, Cassis, Weirauch, Tatarnic, Symonds, *Salsola tragus subsp. tragus* L. (Chenopodiaceae), det. Field ID, 17♂ (AMNH_PBI 00015593–AMNH_PBI 00015609), 12♀ (AMNH_PBI 00015610–AMNH_PBI 00015621) (AM). Greenough River Mouth, 28.86304°S 114.6343°E, 05 Nov 2004, Cassis, Weirauch, Tatarnic, Symonds, *Rhagodia preissii subsp. obovata* (Moq.) Paul G. Wilson (Chenopodiaceae), det. Perth staff PERTH6988377, 7♂ (AMNH_PBI 00015493–AMNH_PBI 00015499), 11♀ (AMNH_PBI 00015500–AMNH_PBI 00015510), 4 juveniles (AMNH_PBI 00015511–AMNH_PBI 00015514) (AM). Hammersley Inlet Campground, 33.95788°S 119.9146°E, 2 m, 28 Nov 1999, R.T. Schuh and G. Cassis, *Suaeda australis* (R.Br.) Moq. (Chenopodiaceae), det. Perth staff PERTH05671213, 7♂ (AMNH_PBI 00006432–AMNH_PBI 00006438), 11♀ (AMNH_PBI 00006439–AMNH_PBI 00006449) (AM). Leeuwin Naturaliste National Park, Canal Rocks, 33.66513°S 115.0165°E, 50 m, 15 Dec 1997, Schuh, Cassis, Brailovsky, Asquith, 1♂ (AMNH_PBI 00002485), 1♀ (AMNH_PBI 00002486) (AMNH). Mosman Park, Perth, 32.0209°S 115.7687°E, 20 m, 29 Nov 1998, G. Cassis, *Rhagodia baccata* (Chenopodiaceae), 4♂ (AMNH_PBI 00006118–AMNH_PBI 00006121), 3♀ (AMNH_PBI 00006122–AMNH_PBI 00006124) (AM); 05 Nov 1998, G. Cassis, *Rhagodia baccata baccata* (Labill.) Moq. (Chenopodiaceae), det. Perth staff PERTH 05227283, 12♂ (AMNH_PBI 00015902–AMNH_PBI 00015913), 10♀ (AMNH_PBI 00015914–AMNH_PBI 00015923) (AM). Peak Charles National Park Campground, 32.88335°S 121.1703°E, 300 m, 20 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Rhagodia preissii preissii* Moq. (Chenopodiaceae), det. Perth staff PERTH05670713, 16♂ (AMNH_PBI 00012056–AMNH_PBI 00012071), 14♀ (AMNH_PBI00012072–AMNH_PBI 00012085) *Melaleuca uncinata* R.Br. (Myrtaceae), det. Perth staff PERTH 05670721, 1♂ (AMNH_PBI 00012351) *Rhagodia preissii preissii* Moq. (Chenopodiaceae), det. Perth staff PERTH-05670713, 6♂ (AMNH_PBI 00015761–AMNH_PBI 00015766), 4♀ (AMNH_PBI 00015769–AMNH_PBI 00015772) (AM). Pilbara Region: Hamersley Station, Railway Rd. just past Cooks Bore to Ridge paddock, 22.30166°S 117.69305°E, 30 Sep 2004–05 Oct 2004, C.V.M. volunteers, 2♂ (AMNH_PBI 00123410, AMNH_PBI 00123411), 3♀ (AMNH_PBI 00123412–AMNH_PBI 00123414) (AM). Poison Creek Beach, Cape Arid National Park, 33.90416°S 123.3519°E, 2 m, 25 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Atriplex isatidea* Moq. (Chenopodiaceae) PERTH05672317, 17♂ (AMNH_PBI 00015648–AMNH_PBI 00015664), 12♀ (AMNH_PBI 00015665–AMNH_PBI 00015676) *Atriplex isatidea subsp. tragus* Moq. (Chenopodiaceae) PERTH05672317, 17♂ (AMNH_PBI 00015648–AMNH_PBI 00015664), 12♀ (AMNH_PBI 00015665–AMNH_PBI 00015676) (AM). *Atriplex isatidea* Moq. (Chenopodiaceae), det. Perth staff PERTH05672317, 3♂ (AMNH_PBI 00002732–AMNH_PBI 00002734), 4♀ (AMNH_PBI 00002705–AMNH_PBI 00002708) (AMNH). Rossiter Bay, Cape Le Grande National Park, 33.96726°S 122.2674°E, 3 m, 23 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Atriplex isatidea* Moq. (Chenopodiaceae), det. Perth staff PERTH05672317, 1♂

(AMNH_PBI 00002736), 2♀ (AMNH_PBI 00002737, AMNH_PBI 00002738) (AMNH). Stokes Inlet, Stokes National Park, 33.8179°S 121.1506°E, 2 m, 26 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Rhagodia baccata baccata* (Labill.)Moq. (Chenopodiaceae), det. Perth staff PERTH05671922, 19♂ (AMNH_PBI 00015543–AMNH_PBI 00015561) (AM). *Rhagodia baccata baccata* (Labill.) Moq. (Chenopodiaceae), det. Perth staff PERTH-05671922, 6♂ (AMNH_PBI 00003111–AMNH_PBI 00003116), 7♀ (AMNH_PBI 00003117–AMNH_PBI 00003123) (AMNH). Useless Loop Rd ca. 20 km W of jct with Shark Bay Rd, 26.56331°S 113.9338°E, 30 m, 25 Oct 2004, Cassis, Wall, Weirauch, Symonds, *Rhagodia latifolia subsp. latifolia* (Benth.) Paul G. Wilson (Chenopodiaceae), det. Perth staff PERTH6987605, 3♂ (AMNH_PBI 00015515–AMNH_PBI 00015517), 8♀ (AMNH_PBI 00015518–AMNH_PBI 00015525) (AM). Yalgorup National Park, near Martins Tank Campground, 32.84222°S 115.66222°E, 15 m, 14 Dec 1997, Schuh, Cassis, Brailovsky, *Rhagodia* sp. (Chenopodiaceae), det. Perth staff PERTH05054990, 2♂ (AMNH_PBI 00006125, AMNH_PBI 00006126), 2♀ (AMNH_PBI 00006127, AMNH_PBI 00006128) (AM). *Rhagodia* sp. (Chenopodiaceae), det. Perth staff PERTH05054990, 2♂ (AMNH_PBI 00002728, AMNH_PBI 00002729), 1♀ (AMNH_PBI 00002730) (AMNH).

OTHER SPECIMENS EXAMINED: **AUSTRALIA: Australian Capital Territory:** Weise's Orchard, Pialligo, 35.317°S 149.183°E, 18 Oct 1968, D. Morgan, *Malus* sp. (Rosaceae), 5♂ (AMNH_PBI 00033216–AMNH_PBI 00033220), 11♀ (AMNH_PBI 00033221–AMNH_PBI 00033231) (ANIC). **New South Wales:** 32.2 km SSW of Bourke on banks of Darling River, 35.3°S 147.9°E, 26 Dec 1973, G. F. Gross, Light Trap, 7♂ (AMNH_PBI 00038546–AMNH_PBI 00038551, AMNH_PBI 00038576), 6♀ (AMNH_PBI 00038552–AMNH_PBI 00038556, AMNH_PBI 00038577) (SAMA). 9.5 km E of Balranald on Sturt Hwy, 34.702°S 143.615°E, 20 Oct 1996, Schuh and Cassis, *Nitraria billardierei* DC. (Zygophyllaceae), det. Perth staff PERTH05095247, 6 juveniles (AMNH_PBI 00006377–AMNH_PBI 00006382) (AM). Cowra, 33.819°S 148.658°E, 25 Mar 1960, M. I. Nikitin, Light Trap, 1♂ (AMNH_PBI 00192756), 1♀ (AMNH_PBI 00192757) (BMNH). Leeton, 34.549°S 146.401°E, 27 Sep 1968, E. L. Jones, 4♀ (AMNH_PBI 00038584, AMNH_PBI 00038585) (SAMA). Murwillumbah, 28.33°S 153.383°E, 08 Apr 1919, F. Muir, 1♂ (AMNH_PBI 00042182) (BPBM). The Rock Nature Reserve, 35.265°S 147.068°E, 14 Sep 1968, Key, Upton and Balderson, 1♀ (AMNH_PBI 00033243) (ANIC). **Northern Territory:** 22 miles S of Alice Springs, 24.3°S 134.6°E, 15 Feb 1996, J. A. Grant, 3♂ (AMNH_PBI 00192758–AMNH_PBI 00192760), 2♀ (AMNH_PBI 00192761, AMNH_PBI 00192762) (BMNH). Alice Springs, 23.699°S 133.881°E, 16 Feb 1966, J. A. Grant, 16♂ (AMNH_PBI 00015737–AMNH_PBI 00015752), 8♀ (AMNH_PBI 00015753–AMNH_PBI 00015760) (AM); 17 Feb 1996, J. A. Grant, 3♂ (AMNH_PBI 00192763–AMNH_PBI 00192765) (BMNH); 14 Feb 1996, J. A. Grant, 1♀ (AMNH_PBI 00192766) (BMNH). Queensland: 91 km N of Quilpie, 25.99847°S 144.4098°E, 300 m, 02 Nov 1998, Schuh, Cassis, Silveira, *Hakea leucoptera* R. Br. (Proteaceae), det. NSW staff NSW427661, 1 adult (AMNH_PBI 00002703) (AMNH). Dalby, 27.17994°S 151.27176°E, F. H. Hobler, 2♂ (AMNH_PBI 00038578, AMNH_PBI 00038579) (SAMA). Sandgate, 27.317°S 153.064°E, 09 Nov 1919, F. Muir, 1♀ (AMNH_PBI 00002746) (AMNH). **South Australia:** 17.6 km S of Innamincka, 27.88068°S 140.6712°E, 130 m, 06 Nov 1998, Schuh, Cassis, Silveira, *Chenopodium auricomum* Lindley (Chenopodiaceae), det. NSW staff, 3 juveniles (AMNH_PBI 00006351–AMNH_PBI 00006353) (AM). 5 km SW of Whyalla, 33.05085°S 137.5004°E, 30 m, 21 Oct 1996, Schuh and Cassis, *Exocarpos aphyllus* R.Br. (Santalaceae), det. Perth staff PERTH 05056209, 6♂ (AMNH_PBI 00012352–AMNH_PBI 00012357) (AM). Eyre Peninsula: 35 km N of Streaky Bay, 32.583°S 134.128°E, 20 m, 13 Aug 1978, W. C. Gagne, (Chenopodiaceae), 5♂ (AMNH_PBI 00042173–AMNH_PBI 00042177), 3♀ (AMNH_PBI 00042178–AMNH_PBI 00042180) (BPBM). Lyup, near Berri, 34.283°S 140.603°E, 28 Oct 1968, N. Richardson, *Prunus* sp. (Rosaceae), 8♂ (AMNH_PBI 00033232–AMNH_PBI 00033239), 1♀ (AMNH_PBI 00033240) (ANIC). *Prunus* sp. (Rosaceae), 2♂ (AMNH_PBI 00038574, AMNH_PBI 00038575)

(SAMA). Mount Crawford State Forest, 34.7122°S 138.9469°E, 06 May 1968, D. Colless and Z. Liepa, 2♀ (AMNH_PBI 00033241, AMNH_PBI 00033242) (ANIC). Mount Lofty, 34.974°S 138.709°E, unknown, 3♀ (AMNH_PBI 00038580, AMNH_PBI 00038581) (SAMA). Owieandana, Flinders Ranges, 30.446°S 138.948°E, Nov 1924, Hale & Tindale, 4♂ (AMNH_PBI 00038570, AMNH_PBI 00038573), 2♀ (AMNH_PBI 00038571, AMNH_PBI 00038572) (SAMA). near Victory Well, Everard Pk. Stn, 27.054°S 132.506°E, 03 Nov 1970, G. Gross, Light Trap, 1♂ (AMNH_PBI 00038568), 1♀ (AMNH_PBI 00038569) (SAMA); 29 Oct 1970, E.G. Matthews, Light Trap, 2♂ (AMNH_PBI 00038563, AMNH_PBI 00038564), 2♀ (AMNH_PBI 00038565, AMNH_PBI 00038566) (SAMA). **Victoria:** 8 km W of Kaniva, 36.377°S 141.241°E, 21 Oct 1963, J. Sedlacek, 1♀ (AMNH_PBI 00042181) (BPBM). **Western Australia:** 11 mi. SW of Cocklebiddy, 32.45°S 126.03°E, 22 Nov 1969, Britton, Taylor and Upton, Light Trap, 1♂ (AMNH_PBI 00038557), 6♀ (AMNH_PBI 00038558–AMNH_PBI 00038562, AMNH_PBI 00038567) (SAMA). 13.2 km N of jct of Agana Kalbarri Rd and Brand Hiway, Galena River Bridge, 27.82917°S 114.6873°E, 190 m, 24 Oct 2004, Cassis, Wall, Weirauch, Symonds, *Atriplex amnicola* Paul G.Wilson (Chenopodiaceae), det. Perth staff PERTH6988431, 1 juvenile (AMNH_PBI 00012350) (AM). 27.6 km N of Coral Bay Rd on Cardabia-Ningaloo Rd, 22.90198°S 113.8167°E, 25 m, 29 Oct 2004, Cassis, Wall, Weirauch, Tatarnic, Symonds, *Salsola tragus subsp. tragus* L. (Chenopodiaceae), det. Field ID, 6 juveniles (AMNH_PBI 00015642–AMNH_PBI 00015647) (AM). 43 km N of Norseman, 31.85648°S 121.6414°E, 300 m, 19 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Olearia muelleri* (Sond.) Benth. (Asteraceae), det. Perth staff PERTH05670691, 1 juvenile (AMNH_PBI 00002612) (AMNH). Cape Arid National Park, Thomas River Campground, 33.8539°S 123.0126°E, 20 m, 24 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Atriplex isatidea* Moq. (Chenopodiaceae), det. Perth staff PERTH-05672317, 1 juvenile (AMNH_PBI 00002743) (AMNH). Carnarvon, Small Boat Harbour, 24.90044°S 113.6477°E, 26 Oct 2004, Cassis, Wall, Weirauch, Tatarnic, Symonds, *Chenopodium murale* L. (Chenopodiaceae), det. Perth staff PERTH6989047, 1 juvenile (AMNH_PBI 00012092) (AM). Conspicuous Beach, Walpole-Nornalup National Park, 10 km E of Nornalup, 35.03725°S 116.8443°E, 30 m, 17 Dec 1997, Schuh, Cassis, Brailovsky, *Rhagodia baccata* (Labill.) Moq. (Chenopodiaceae), det. Perth staff PERTH05095271, 3 juveniles (AMNH_PBI 00006168–AMNH_PBI 00006170) (AM). Fowlers Camp (at end of Fowlers Camp Rd), Shark Bay World Heritage Area, 26.10801°S 113.6167°E, 24 Oct 2004, Cassis, Wall, Weirauch, Symonds, *Chenopodium murale* L. (Chenopodiaceae), det. Perth staff PERTH6988016, 1 juvenile (AMNH_PBI 00015901) *Salsola tragus subsp. tragus* L. (Chenopodiaceae), det. Perth staff PERTH6988024, 1 juvenile (AMNH_PBI 00012095) (AM). Mosman Park, Perth, 32.0209°S 115.7687°E, 20 m, 05 Nov 1998, G. Cassis, *Rhagodia baccata baccata* (Labill.) Moq. (Chenopodiaceae), det. Perth staff PERTH05227283, 1♀ (AMNH_PBI 00015924) (AM). Peak Charles National Park Campground, 32.88335°S 121.1703°E, 300 m, 20 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Rhagodia preissii preissii* Moq. (Chenopodiaceae), det. Perth staff PERTH05670713, 1 juvenile (AMNH_PBI 00012423) (AM). Poison Creek Beach, Cape Arid National Park, 33.90416°S 123.3519°E, 2 m, 25 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Atriplex isatidea subsp. tragus* Moq. (Chenopodiaceae) PERTH-05672317, 15 juveniles (AMNH_PBI 00015677–AMNH_PBI 00015691) (AM). Rossiter Bay, Cape Le Grande National Park, 33.96726°S 122.2674°E, 3 m, 23 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Atriplex isatidea* Moq. (Chenopodiaceae), det. Perth staff PERTH-05672317, 1 juvenile (AMNH_PBI 00002739) (AMNH). Stokes Inlet, Stokes National Park, 33.8179°S 121.1506°E, 2 m, 26 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Rhagodia baccata baccata* (Labill.) Moq. (Chenopodiaceae),det. Perth staff PERTH-05671922, 5 juveniles (AMNH_PBI 00015562–AMNH_PBI 00015566) (AM). **MEXICO: Baja California Norte:** Bahia de los Angeles, Llave Island, site 5, 28.99869°N 113.52048°W, 20 m, 11 Mar 1998, F. Sanchez Pinero, 1♂ (AMNH_PBI 00114164) (CNC). Bahia de los Angeles, Los Gemelos West Island, 28.95548°N 113.48144°W, 3 m, 06 Mar

1998, F. Sanchez Pinero, 54♂ (AMNH_PBI 00114146–AMNH_PBI 00114163, AMNH_PBI 00114170–AMNH_PBI 00114177, AMNH_PBI 00114181–AMNH_PBI 00114186, AMNH_PBI 00114192–AMNH_PBI 00114206, AMNH_PBI 00114210–AMNH_PBI 00114216), 18♀ (AMNH_PBI 00114143–AMNH_PBI 00114145, AMNH_PBI 00114165–AMNH_PBI 00114168, AMNH_PBI 00114178–AMNH_PBI 00114180, AMNH_PBI 00114187–AMNH_PBI 00114191, AMNH_PBI 00114207–AMNH_PBI 00114209), 1 juvenile (AMNH_PBI 00114169) (CNC). **Chihuahua:** Ruinas de Paquime, SW of Nuevo Casas Grande, 30.36888°N 107.94777°W, 1492 m, 26 Aug 1998, M. D. Schwartz, *Chenopodium* sp. (Chenopodiaceae), 31♂ (AMNH_PBI 00114082–AMNH_PBI 00114085, AMNH_PBI 00114088–AMNH_PBI 00114114), 30♀ (AMNH_PBI 00114086–AMNH_PBI 00114087, AMNH_PBI 00114115–AMNH_PBI 00114142) (CNC). Sonora: 11 km E of Rosario de Tesopaco on road to La Estrella, 27.83247°N 109.2528°W, 479 m, 03 May 2005, Schwartz, Weirauch, Cervantes, 1♂ (AMNH_PBI 00108489), 1♀ (AMNH_PBI 00108490) (AMNH). NEW ZEALAND: Hawke's Bay: Napier, 39.5043°S 176.8924°E, 06 Apr 1975, W.J. Knight, 16♂ (AMNH_PBI 00192767–AMNH_PBI 00192782), 15♀ (AMNH_PBI 00192783–AMNH_PBI 00192797) (BMNH). **Marlborough:** Kaikoura Peninsula, 42.4355°S 173.7102°E, 26 Jan 2000–28 Jan 2000, D.K. McAlpine and R. Meier, 2♂ (AMNH_PBI 00012439, AMNH_PBI 00012440) (AM). North Auckland: Days Bay, 36.8128°S 175.1656°E, 01 Feb 1951, T. E. Woodward, *Lepidium oleraceum* Forst. (Cruciferae), 4♂ (AMNH_PBI 00192748–AMNH_PBI 00192751), 3♀ (AMNH_PBI 00192752–AMNH_PBI 00192754) (BMNH). **NORFOLK ISLAND:** none, 29.033°S 167.949°E, Mar 1971, K.L.S. Harley, 1♀ (AMNH_PBI 00033251) (ANIC); A. M. Lea, 1♀ (AMNH_PBI 00038582) (SAMA). **USA: Arizona:** *Cochise Co.:* Chiricahua Mountains, 1 mi N of Rustler Park, 31.91472°N 109.26861°W, 2536 m, 18 Aug 2000–21 Aug 2000, J. B. Woolley, 1♂ (AMNH_PBI 00184915) (TAMU). Rt. 191, ca. 5 km N of Cochise, 32.16°N 109.94166°W, 20 Jun 2005, A. G. Wheeler, Jr., *Atriplex canescens* (Chenopodiaceae), 8♂ (AMNH_PBI 00191166–AMNH_PBI 00191173), 6♀ (AMNH_PBI 00191174–AMNH_PBI 00191179) (USNM). ca. 12 km N of Benson, 32.05833°N 110.34166°W, 21 Jun 2005, A. G. Wheeler, Jr., *Atriplex canescens* (Chenopodiaceae), 1♂ (AMNH_PBI 00191180), 2♀ (AMNH_PBI 00191189, AMNH_PBI 00191190) (USNM). *Navajo Co.:* Holbrook, 34.905°N 110.185°W, 19 Jun 2005, A. G. Wheeler, Jr., 1♀ (AMNH_PBI 00191181) (USNM). **California:** *Los Angeles Co.:* Intercepted from Australia: Los Angeles, 33.94517°N 118.40266°W, 31 m, 06 Oct 1998, Unknown, *Delphinium* sp. (Ranunculaceae), 2♀ (AMNH_PBI 00133761, AMNH_PBI 00133762) (USNM). *Orange Co.:* Trampas Canyon at San Juan Creek, 33.51555°N 117.57888°W, 04 Sep 1999, Yanega and Gates, 1♀ (AMNH_PBI 00119981) (UCR). *Riverside Co.:* Riverside, 33.95333°N 117.39528°W, 25 Mar 2003, K. W. Cooper, 1♀ (AMNH_PBI 00133750) (USNM); 07 Aug 2001, K. W. Cooper, 1♀ (AMNH_PBI 00133746) (USNM); 10 Aug 2002, K. W. Cooper, 1♀ (AMNH_PBI 00133748) (USNM); 24 Aug 1999, K. W. Cooper, 1♀ (AMNH_PBI 00133749) (USNM); 14 Oct 2002, K. W. Cooper, 1♂ (AMNH_PBI 00133747) (USNM). *San Bernardino Co.:* Pinyon Hills, 34.39722°N 117.60944°W, 1447 m, 31 Jul 2003, G. R. Ballmer and D. Powell, 1♀ (AMNH_PBI 00119982) (UCR). *San Diego Co.:* Intercepted from Mexico: San Diego, 32.68787°N 117.13418°W, 2 m, 11 May 2000, unknown, *Atriplex* sp. (Chenopodiaceae), 1♀ (AMNH_PBI 00133754) (USNM); 13 Aug 1998, unknown, *Limonium sinuatum* (L.) P. Mill. (Plumbaginaceae), 1♂ (AMNH_PBI 00133755), 1 juvenile (AMNH_PBI 00133756) (USNM); 20 Mar 1998, unknown, *Limonium sinuatum* (L.) P. Mill. (Plumbaginaceae), 1♂ (AMNH_PBI 00133757) (USNM); 19 Mar 1998, unknown, *Limonium sinuatum* (L.) P. Mill. (Plumbaginaceae), 1♀ (AMNH_PBI 00133758) (USNM); 06 Nov 1996, unknown, *Celosia* sp. (Amaranthaceae), 1♂ (AMNH_PBI 00133759) (USNM); 18 Sep 2001, unknown, *Amaranthus caudatus* (L.) (Amaranthaceae), 1♀ (AMNH_PBI 00133760) (USNM). **Florida:** *Broward Co.:* Intercepted from Mexico: Fort Lauderdale [IPRL, USDA], 26.08128°N 80.23768°W, 3 m, 21 May 1997, unknown, *Atriplex* sp. (Chenopodiaceae), 3♀ (AMNH_PBI 00133751–AMNH_PBI 00133753) (USNM). **Hawaii:**

French Frigate Shoals: Tern Island, 23.87°N 166.28472°W, 25 Sep 2000, G.M. Nishida, 1♂ (AMNH_PBI 00042602) *Chenopodium murale* (Chenopodiaceae), 2♂ (AMNH_PBI 00042599, AMNH_PBI 00042600), 1♀ (AMNH_PBI 00042601) (BPBM). **New Mexico:** *Otero Co.:* Alamogordo, 32.88°N 105.96166°W, 22 Jun 2005, A. G. Wheeler, Jr., *Atriplex canescens* (Chenopodiaceae), 3♀ (AMNH_PBI 00191182–AMNH_PBI 00191184) (USNM). **Texas:** *Brewster Co.:* Big Bend National Park, Rio Grande nr Boquillas, 29.19583°N 102.93194°W, 576 m, 28 Apr 2001, D. E. Baumgardner, 4♀ (AMNH_PBI 00184911–AMNH_PBI 00184914) (TAMU). *Cameron Co.:* Jct. FM 509 & US 281, 26.052°N 97.73583°W, 19 Sep 2006, T. J. Henry and R. Coleman, 1♂ (AMNH_PBI 00191185), 3♀ (AMNH_PBI 00191186–AMNH_PBI 00191188) (USNM).

Coridromius chinensis Liu and Zhao
Figures 1C–D, 4, 6, 7N–P, 9A, map 6

Coridromius chinensis Liu and Zhao, 1999: 56–58.
Coridromius bufo Miyamoto and Yasunaga, 1999: 33–35 (junior synonym); Chérot et al., 2004: 63–64 (synonymy).

DIAGNOSIS: Distinguished by the following combination of characters: bilobed proepisternum; swollen, rounded lobe at apex of scutellum; mottled coloration; AI with dark brown basal annulation; AII with dark brown annulation but lacking dark brown postmedial band; right paramere with sharp, triangular spicule; left paramere scythelike with gutter open its entire length. *C. chinensis*, *confusus*, *minusculus*, and *punctatus* are all very similar but can be distinguished from one another by minor variations in color pattern and slight differences in male genitalia and scutellar shape. The apex of the scutellum, while swollen in all four species, is much more so in *chinensis* than in the others. *C. confusus* is also easily distinguished from the others, as it is the only species where the left paramere is extremely thin and forms a completely enclosed tube, open only at the apex. *C. minusculus* also has a very thin left paramere, but it is open the entire length. *C. confusus* and *minusculus* also share identical antennal banding, with a pale yellow band dividing the dark brown annulation on AII, as well as similar hemelytral coloration, with the dark brown embolium marked with two broad yellow markings apically and basally. *C. chinensis* and *punctatus*, on the other hand, have thicker left parameres and lack a subapical dark brown annulation on AII. To separate *chinensis* from *punctatus* one can look at the coloration of AI: in the former it is pale with a dark brown band, while in the latter it is dark brown with yellow base and apex. Additionally, the ventral apical process on the posterior margin of the pygophore is long and thin in *chinensis* but shorter and thicker in *punctatus*.

REDESCRIPTION: COLORATION (figs. 1D, 4, 6): Head: Mottled light orange-brown and whitish yellow; frons with faint light orange-brown vittae, medial stripe pale; depressions on vertex and above antennae darkened; clypeus whitish yellow with two irregular dark brown stripes; mandibular and maxillary plates whitish yellow, becoming orange-brown along posterior margins; gena orange-brown; buccula whitish yellow, brown basally; labrum orange-brown, labium light orange-brown, darkened apically. Antenna: AI whitish yellow with dark brown annulation near base; AII light orange-brown with whitish-yellow subapical band followed by dark brown annulation; AIII and AIV dark brown with whitish-yellow bases. Thorax: Pronotal collar whitish-yellow; pronotum whitish yellow with mottled orange-brown punctures, with two small slightly darker orange-brown markings along anterior behind eyes, seldom darkened around callar region, sometimes with indistinct whitish-yellow medial stripe, sometimes with two indistinct, broad dark brown markings on pronotal disc, margins without distinct piping; mesoscutum orange-brown; scutellum whitish yellow with mottled orange-brown punctures, medial stripe and apex pale; thoracic pleura dark orange-brown, whitish yellow along caudal margins; proepisternal lobes whitish yellow. Hemelytra: Mostly orange-brown, sometimes with anterior portion of clavus slightly to distinctly darker, commissure pale; corium becoming paler at apex, sometimes with faint darker brown patches; embolium with faint whitish-yellow subbasal and apical markings; cuneus light orange-brown, pale at apex; membrane

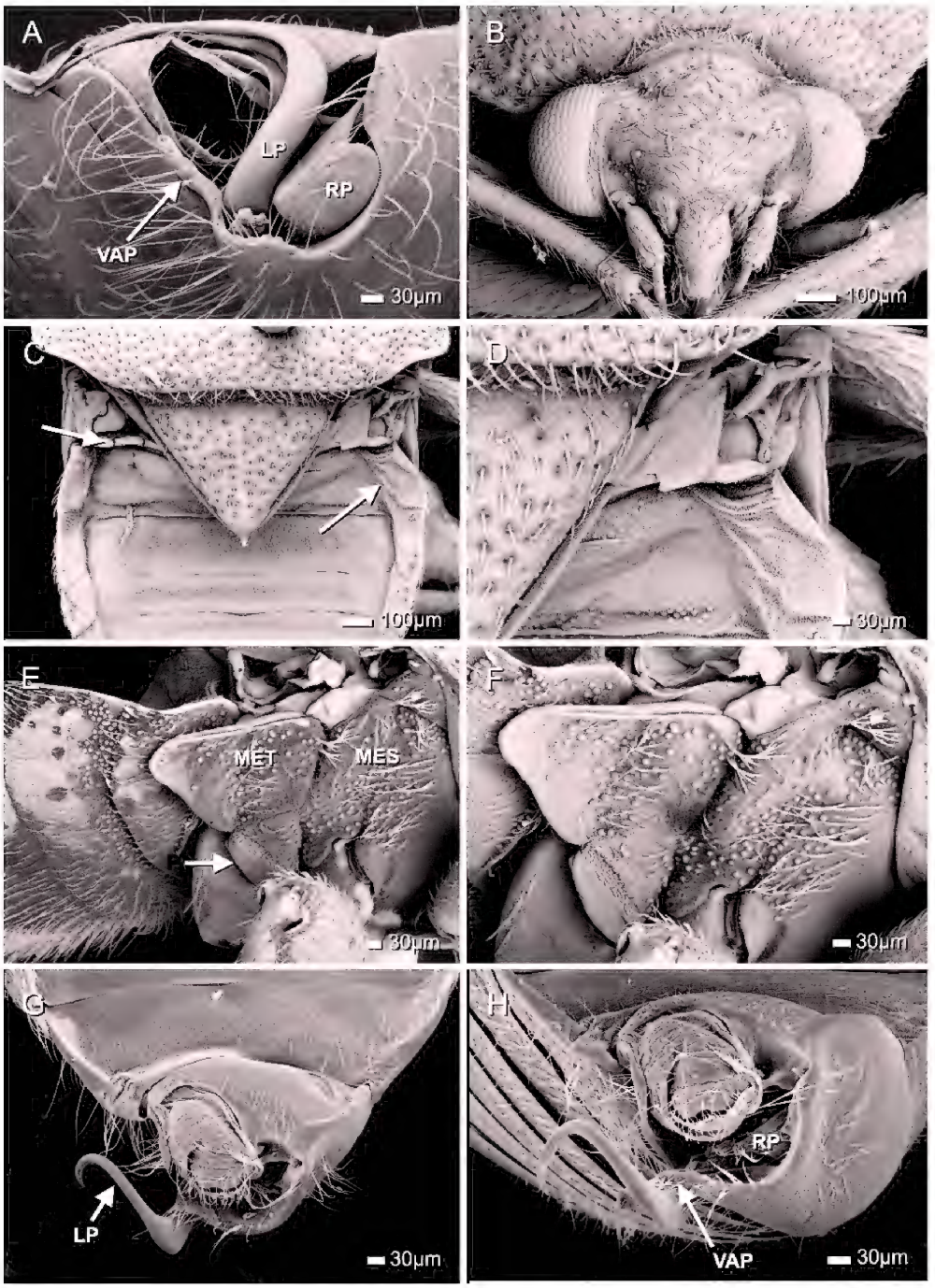


Fig. 9. Scanning electron micrographs: **A:** *C. chinensis* ♂ genitalia, posterior view. **B–H:** *C. confusus*: **B:** Head, anterior view. **C:** ♀ scutellum and abdomen, dorsal view. Arrow indicates minor swelling and desclerotization of laterotergite I. **D:** Detail of swelling of laterotergite I. **E:** ♀ thorax and abdomen, lateral view. **F:** Detail of metepimeron and peritreme. **G.** ♂ genitalia, dorsal view. **H:** Detail of ♂ genitalia. LP = left paramere, MES = mesepimeron, MET = metepimeron, MN = metanotum, P = peritreme, RP = right paramere, VAP = ventral apical process.

brown with whitish-yellow veins bounded by irregular darker brown markings. Legs: Mostly whitish yellow with brown markings; coxae whitish yellow; pro- and mesofemur with broad, subapical irregular brown markings, bothria whitish yellow; metafemur laterally with 6–7 irregular diagonal brown stripes basally, becoming blotchy and indistinct apically; irregular whitish-yellow patch anterodorsally; stripes fusing ventrally with large orange-brown patch, lateral depressions near apex orange-brown; all tibiae whitish yellow with irregular orange-brown markings; metatibial spines dark brown. Abdomen: Light orange-brown, posterior margin of sternite II dark orange-brown. SURFACE AND VESTITURE (figs. 4, 6): Irregular swellings on head with deep, somewhat coalescing punctures; pronotum and propleuron deeply and irregularly punctate; scutellum deeply and irregularly rugulopunctate, impunctate along midline; metepimeron and hemelytra impunctate; metafemur with a few punctures distodorsally; head and dorsum clothed in long, white setae. STRUCTURE (figs. 1D, 4, 6): Head: Highly contoured; frons strongly tumescent, bounded by irregular depressions and three minor swellings laterally and posteriorly; foveae adjacent to eyes and near posterior margin of vertex deep; posterior margin of head medially rounded, not carinate; gena swollen; mandibular plate tumescent. Thorax: Pronotum broad and somewhat elongate, posteriorly rounded, steeply declivent, deeply, irregularly punctate, anterolateral margins weakly carinate; submarginal region of humeral angles strongly excavate; posterior weakly medially cleft; callar region weakly developed; proepisternum bilobed; propleuron deeply irregularly punctate; posterior margin of metepimeron somewhat lobate; metanotum prominent and flared; scutellum dorsally flattened, apex a rounded lobe (figs. 1D, 4). Hemelytra: Costal margin evenly rounded over its entire length, anterior portion not expanded. Legs: Metatibial spines long and thick. Abdomen: When viewed laterally, posterior margin of abdominal sternite II not distinctly angular. MALE GENITALIA (figs. 7N–P, 9A): Right paramere rounded with a long, sharp triangular process (figs. 7O–P, 9A); left paramere scythe-shaped, slightly twisted along its axis, thick and laterally compressed at base, becoming thin apically, gutter open over entire length (figs. 7N, 9A); margin of pygophore with long mesal suture and with long, thin fingerlike ventral apical process (fig. 9A). FEMALE PARAGENITALIA: No visible external paragenitalia.

HOST: Collected from the flowers of an unidentified *Macaranga* sp. (fig. 1C–D), *Mallotus japonicus* (Euphorbiaceae) and *Pentaspadon motleyi* (Anacardiaceae).

DISTRIBUTION: *C. chinensis* is one of the most widely distributed species of *Coridromius*, ranging from Nepal and India in the west to Brunei in the east (map 6). It is also known from Northern Queensland, Australia, where it is represented by two specimens.

PARATYPES: **CHINA: Guangxi Prov.:** Yangshu County, 24.7°N 110.4°E, 11 Sep 1964, Liang-Chen Wang, 3♂ (AMNH_PBI 00178050–AMNH_PBI 00178051, AMNH_PBI 00718052), 1♀ (AMNH_PBI 00718053) (NKMU).

OTHER SPECIMENS EXAMINED: **AUSTRALIA: Queensland:** 1 km SE of Mt. Cook, 15.3°S 145.16°E, 13 Oct 1980, T. Weir, 2♀ (AMNH_PBI 00201293, AMNH_PBI 00201294) (QM). **BRUNEI DARUSSALAM:** Bukit Sulang, near Lamunin, 4.67777°N 114.72694°E, 20 Aug 1982–10 Sep 1982, N. E. Stork, *Pentaspadon motleyi* (Anacardiaceae), 1♂ (AMNH_PBI 00178011) (BMNH). **CHINA: Yunnan Prov.:** Xishuangbanna Tropical Botanical Garden, edge of gallery forest, 21.93222°N 101.245°E, 547 m, 26 May 2006, N. Tatarnic, *Macaranga* sp. (Euphorbiaceae), 13♂ (AMNH_PBI 00006050–AMNH_PBI 00006062), 5♀ (AMNH_PBI 00006063–AMNH_PBI 00006067) (AMNH). Xishuangbanna Tropical Botanical Garden, gallery forest by river, 21.93333°N 101.24444°E, 553 m, 26 May 2006–28 May 2006, N. Tatarnic, *Macaranga* sp. (Euphorbiaceae), 14♂ (AMNH_PBI 00006020–AMNH_PBI 00006033), 16♀ (AMNH_PBI 00006034–AMNH_PBI 00006049) (AMNH). **INDIA: Karnataka:** Kolar Dist.: Chikkaballapura (Chikballapur), 13.28°N 77.44°E, 1926, T.V. Campbell, 2♂ (AMNH_PBI 00178005, AMNH_PBI 00178006), 1♀ (AMNH_PBI 00178007) (BMNH). Mysore, Nandidrug, 12.18°N 76.42°E, 1930, T. V. Campbell, 8 adults (AMNH_PBI 00178001)

(BMNH); 1926, T. V. Campbell, 10 adults (AMNH_PBI 00178003) (BMNH). **Meghalaya:** West Garo Hills, Balphakram NP, 25.18333°N 90.85°E, 250–550 m, 22–27 May 1996, E. Jendek and O. Sausa, 1♂ (AMNH_PBI 00189982) (NHMW). West Garo Hills, Nokrek NP, 25.49333°N 90.325°E, 950–1250 m, 09–17 May 1996, E. Jendek and O. Sausa, 1♂ (AMNH_PBI 00018971), 1♀ (AMNH_PBI 00018972) (NHMW). **Uttaranchal:** Kumaon Div.: West Almora, 30.18333°N 80.01666°E, H. G. Crawford, 1♂ (AMNH_PBI 00178004) (BMNH). Nainital Dist.: Bindukhera, 29.33333°N 79.5°E, 1938 m, 13 Apr 1909, Unknown, 1♂ (AMNH_PBI 00178002) (BMNH). **JAPAN: Honshu:** Okayama Pref.: Mount Takakura, Sanyo T., Okayama, 34.75694°N 133.85527°E, 21 Jul 1996, T. Yasunaga, 2♂ (AMNH_PBI 00190001), 5 adults (AMNH_PBI 00189999, AMNH_PBI 00190002) (TYCN). **Kyushu:** Miyazaki Pref.: Okawachi, Shiiba Village, 32.01666°N 131.35°E, 21 Jul 1992, T.J. Henry and A.G. Wheeler, 1♂ (AMNH_PBI 00185358), 2♀ (AMNH_PBI 00185356, AMNH_PBI 00185357) *Mallotus japonicus* (Euphorbiaceae), 1♂ (AMNH_PBI 00185359), 2♀ (AMNH_PBI 00185360, AMNH_PBI 00185361) (USNM). Okinawa Pref.: Ryukyu Islands, Ishigaki I., Kobo, Miyako, 24.2°N 124.09°E, 10–20 Nov 1952, G. Bohart, 1♂ (AMNH_PBI 00042144) (BPBM). Ryukyu Islands, Miyako I., Hirara, 24.8°N 125.2833°E, 28 m, 23 Oct 1952, G. Bohart, 1♀ (AMNH_PBI 00042143) (BPBM). **LAO PEOPLE'S DEMOCRATIC REPUBLIC: Luang Namtha Prov.:** Luang Nam Tha, ~3 km N of town, 20.97333°N 101.37777°E, 600 m, 03 Jun 2006, N. Tatarnic and D. C. Darling, *Macaranga* sp. (Euphorbiaceae), 5♂ (AMNH_PBI 00006078–AMNH_PBI 00006082), 1♀ (AMNH_PBI 00006083) (AMNH). Luang Namtha, behind airport, 20.94777°N 101.40305°E, 547 m, 03 Jun 2006, N. Tatarnic and D. C. Darling, *Macaranga* sp. (Euphorbiaceae), 2♂ (AMNH_PBI 00006075, AMNH_PBI 00006076) (AMNH). Nam Tha N. P., ~30 min from Ban Nalan village, 20.84027°N 101.34694°E, 639 m, 04 Jun 2006, N. Tatarnic and D. C. Darling, *Macaranga* sp. (Euphorbiaceae), 1♂ (AMNH_PBI 00006077) (AMNH). ca. 10 km E Luang Namtha, 20.95°N 101.4167°E, 600 m, 19 Jun 1996, Schillhammer, 1♂ (AMNH_PBI 00190013) (NHMW). **Sekong Prov.:** Bolavens Plateau, N slope, ca. 10 km N. Mg Tha Theng, 15.5°N 106.43333°E, 500–700 m, 29–30 May 1996, Schillhammer, 2♂ (AMNH_PBI 00189980, AMNH_PBI 00189981) (NHMW). **NEPAL:** Royal Chitwan National Park, Machan Resort, 27.58305°N 84.5°E, 07–09 Sep 2005, T. Yasunaga, M. Takai and T. Shishido, 1♂, 1♀ (AMNH_PBI 00190000) (TYCN). **TAIWAN:** Nantou Co.: Lien-hua-chih, 3 km W of Yuchih, 24.21667°N 121.5°E, 12–14 Jul 1992, T.J. Henry and A.G. Wheeler, 1♂ (AMNH_PBI 00185363), 1♀ (AMNH_PBI 00185364) *Mallotus japonicus* (Euphorbiaceae), 1♂ (AMNH_PBI 00185362) (USNM). Pihu, 49 km E of Taipei on Hwy 9 to Yilan, 29.245°N 105.6458°E, 380 m, 18 Feb 1972, T.C. Maa, 1♀ (AMNH_PBI 00042145) (BPBM). **VIETNAM:** Tam Dao NP, 21.4536°N 105.6436°E, 900 m, 17–18 Jun 1999, Y. Nakatani, 3♂ (AMNH_PBI 00190009–AMNH_PBI 00190011) (TYCN).

Coridromius confusus, new species
Figures 4, 6, 7Q–S, 9B–H, map 3

HOLOTYPE: Male: **INDONESIA: Sulawesi Utara:** Dumoga-Bone National Park, Plot A, Fog 11, 0.613°N 124.089°E, 230 m, 10 Mar 1985, Royal Entomological Society of London: Project Wallace (AMNH_PBI 00177949) (BMNH).

DIAGNOSIS: Distinguished by the following combination of characters: bilobed proepisternum; apex of scutellum rounded and weakly swollen; mottled coloration; AII with dark brown postmedial band; right paramere with sharp, triangular spicule; left paramere thin and scythelike with gutter closed until apex. This species is very similar to *chinensis*, *minusculus*, and *punctatus*, but the capillary-like left paramere, which is closed until its apex is diagnostic (for further discussion, see *chinensis* above).

DESCRIPTION: COLORATION (figs. 4, 6): Mottled cream and light brown. Head: Cream to whitish yellow with light brown markings, especially in punctures and foveae; frons with light brown vittae; mandibular and maxillary plates pale medially, becoming brown around edges; buccula pale, dark brown basally; clypeus pale with two sub-

medial longitudinal light brown to reddish brown stripes; labrum red; labium pale, brown apically. Antenna: AI cream with median dark brown annulation; AII light orange-brown with dark brown apical annulation, broken by a cream band near its base, tip of segment bright red; AIII and AIV dark brown with cream bases, tip of AIII bright red. Thorax: Pronotal collar cream to light yellow brown, darker along anterior and posterior margins, posterior margin somewhat reddened; pronotum cream to whitish yellow with light brown punctures and darker brown mottling, two small dark brown marks along anterior margin behind eyes; with or without pale medial stripe; callar region sometimes darkened, disc sometimes with two irregular broad, darkened patches, lateral and posterior margins without distinct pale piping; mesoscutum dark orange-brown; scutellum cream to whitish yellow with mottled light brown punctures; thoracic pleura dark reddish brown, posterior margins not pale; proepisternal lobes cream. Hemelytra: Mostly orange-brown with cream markings; clavus darkened basally; embolium orange-brown, dark brown medially with broad cream markings anteriorly and posteriorly; cuneus orange-brown, generally becoming reddened on outer margin and at apex; membrane light brown with mottled darker brown markings; veins pale, bounded by irregular darker brown markings. Legs: Mostly cream to pale yellow with brown markings; pro- and mesofemora with broad, subapical dark brown bands, bothria distinct and pale; metafemur laterally with eight irregular diagonal dark brown stripes ventrally blended into a broad dark brown marking, several punctures at apex tinged red, lateroapical depressions orange-brown, bothria pale; tibiae cream with irregular dark brown bands; metatibial spines dark brown. Abdomen: Light orange-brown with darker brown markings laterally along dorsal margin. SURFACE AND VESTITURE: (figs. 4, 6, 9B–F) Irregular swellings on head with deep somewhat coalescing punctures (fig. 9B); pronotum and propleuron deeply and irregularly punctate; scutellum deeply and irregularly rugulopunctate, impunctate along midline (fig. 9C–D); metepimeron (fig. 9E–F) and hemelytra impunctate; metafemur irregularly punctate; head and dorsum clothed in long, white, decumbent setae. STRUCTURE (figs. 4, 6, 9B–D): Head: Highly contoured; frons strongly tumescent medially, bounded by irregular depressions and three minor swellings laterally and posteriorly; foveae adjacent to eyes and near posterior margin of vertex deep; posterior margin of head medially rounded, not carinate; gena swollen; mandibular plate tumescent (figs. 6, 9B). Thorax: Pronotum broad and somewhat elongate, posteriorly rounded, steeply declivent, anterolateral margin weakly carinate, posterior margins of humeral angles strongly excavate; posterior margin not medially cleft, callar region weakly developed; proepisternum bilobed; posterior margin of metepimeron in the form of a rounded, somewhat triangular lobe; metanotum prominent and flared (fig. 9C–D); scutellum somewhat flattened, apex slightly swollen and rounded (fig. 9C). Hemelytra: Costal margin evenly rounded over entire length. Legs: Metatibial spines long and thick. Abdomen: When viewed laterally, posterior margin of abdominal sternite II not distinctly angular. MALE GENITALIA (figs. 7Q–S, 9G–H): Right paramere rounded with a long, sharp, triangular apophysis (fig. 7R–S); left paramere scythe-shaped, slightly twisted along axis, thick and laterally compressed at base, becoming very thin, gutter completely closed until apex (figs. 7Q, 9G–H); posterior margin of pygophore with long mesal suture and thin fingerlike ventral apical process (fig. 9G–H). FEMALE PARAGENITALIA: Indistinct; first two right laterotergites dorsally membranous and transversely striate (fig. 9C–D), site of copulation unknown.

ETYMOLOGY: The epithet *confusus* (Latin, "indistinct, hard to recognize") reflects the difficulty in separating this species from *chinensis* and other related species.

REMARKS: This species was collected in large numbers through canopy fogging by the Royal Entomological Society of London's Project Wallace expedition in 1985.

HOST: No host records.

DISTRIBUTION: Known only from northern Sulawesi and a single specimen from the Solomon Islands (map 3).

PARATYPES: **INDONESIA: Sulawesi Utara:** Dumoga-Bone National Park, Plot

A, Fog 13, 0.613°N 124.089°E, 230 m, 11 Jul 1985, Royal Entomological Society of London: Project Wallace, 3♂ (AMNH_PBI 00192728–AMNH_PBI 00192730), 5♀ (AMNH_PBI 00178040–AMNH_PBI 00178042, AMNH_PBI 00192737–AMNH_PBI 00192738) (AM). 2♂ (AMNH_PBI 00192726, AMNH_PBI 00192727), 2♀ (AMNH_PBI 00192735, AMNH_PBI 00192736) (AMNH). 33♂ (AMNH_PBI 00177976–AMNH_PBI 00178000, AMNH_PBI 00178036–AMNH_PBI 00178039, AMNH_PBI 00178044–AMNH_PBI 00178047), 29♀ (AMNH_PBI 00178012–AMNH_PBI 00178035, AMNH_PBI 00178043, AMNH_PBI 00192731–AMNH_PBI 00192734) (BMNH). 2♂ (AMNH_PBI 00042586, AMNH_PBI 00042587), 3♀ (AMNH_PBI 00042588–AMNH_PBI 00042590) (BPBM). Dumoga-Bone National Park, Plot A, Fog11, 0.613°N 124.089°E, 230 m, 10 Mar 1985, Royal Entomological Society of London: Project Wallace, 1♀ (AMNH_PBI 00177963) (AM). 11♂ (AMNH_PBI 00177950–AMNH_PBI 00177960), 14♀ (AMNH_PBI 00177961–AMNH_PBI 00177962, AMNH_PBI 00177964–AMNH_PBI 00177975) (BMNH). Dumoga-Bone National Park, Sites 10 & 11, Tumpah Transect, 0.613°N 124.089°E, 1040 m, Feb 1985, J. D. Holloway, Light Trap, 1♀ (AMNH_PBI 00192739) (BMNH).

OTHER SPECIMENS EXAMINED: **SOLOMON ISLANDS: Guadalcanal:** Honiara, 9.42805°S 160.05472°E, 200 m, Jan 1973, N. L. H. Krauss, 1♂ (AMNH_PBI 00042142) (BPBM).

Coridromius crassus, new species
Figures 4, 6, 10A–D, map 3

HOLOTYPE: Male: **INDONESIA: Sulawesi Utara:** Dumoga-Bone National Park, Gunung Ambang Forest Reserve, near Kotamobagu, 0.55°N 123.98333°E, 1200 m, 18 Feb 1985, Royal Entomological Society of London: Project Wallace (AMNH_PBI 00192740) (BMNH).

DIAGNOSIS: Distinguished by the following characters: broadly flared hemelytra; bilobed proepisternum; thick, sharply angled left paramere; right paramere U-shaped when viewed from above; males with patch of dense conelike setae on the left posterior margins of abdominal segments VII and VIII. *C. crassus* is similar to *declivipennis*, *nakatanii*, and *pteraulos* but is much wider across the pronotum and hemelytra, and differs in coloration. The left paramere is also much thicker than in the other three species.

DESCRIPTION: COLORATION (figs. 4, 6): Mostly orange-brown and yellow with darker brown markings. Head: Orange-brown, becoming more yellow on frons; vittae on frons dark brown; lateral and medial swellings on vertex yellow, merging with yellow ocular and posterior margins; clypeus yellow with one medial brown spot and two lateral brown stripes; gena, mandibular and maxillary plates yellow to orange-brown; buccula yellow, dark brown basally; labrum brown, labium yellow, brown apically. Antenna: AI dark brown, apices yellow; AII light orange-brown with pale subapical annulation adjacent to dark brown apical annulation; AIII and AIV dark brown, yellow basally. Thorax: Pronotal collar yellow; pronotum mostly orange-brown with faint yellow medial stripe and margins, two dark brown spots on anterior margin behind eyes, two larger brown spots above callar region, sometimes fused together, anterior of humeral angles sometimes with faint dark brown spots, submarginal region of humeral angles sometimes yellowed; mesoscutum orange-brown, dark brown medially; scutellum orange-brown with medial stripe, apex and sides yellow; thoracic pleura orange-brown to dark brown, posterior margins yellowed; anterior lobe of proepisternum yellow. Hemelytra: Orange-brown with dark brown marking halfway down (except on clavus), slightly yellow along claval commissure and lateral margins; fascia above cuneus yellow; cuneus orange-brown; membrane light brown with dark brown veins. Abdomen: Orange-brown with dark brown and yellow markings along dorsolateral margins. Legs: All coxae pale yellow; pro- and mesofemora pale yellow, brown apically, metafemur yellow to orange-brown with 9 diagonal dark brown stripes on outer surface, lateroapical depression dark brown; tibiae yellow, metatibia sometimes brown. SURFACE AND VESTITURE (figs. 4, 6): Minor swelling on vertex finely punctate; pronotum, propleuron, metepimeron, and scutellum finely punctate; hemelytra and cuneus irregularly punctate; head and dorsum clothed in long, white, decum-

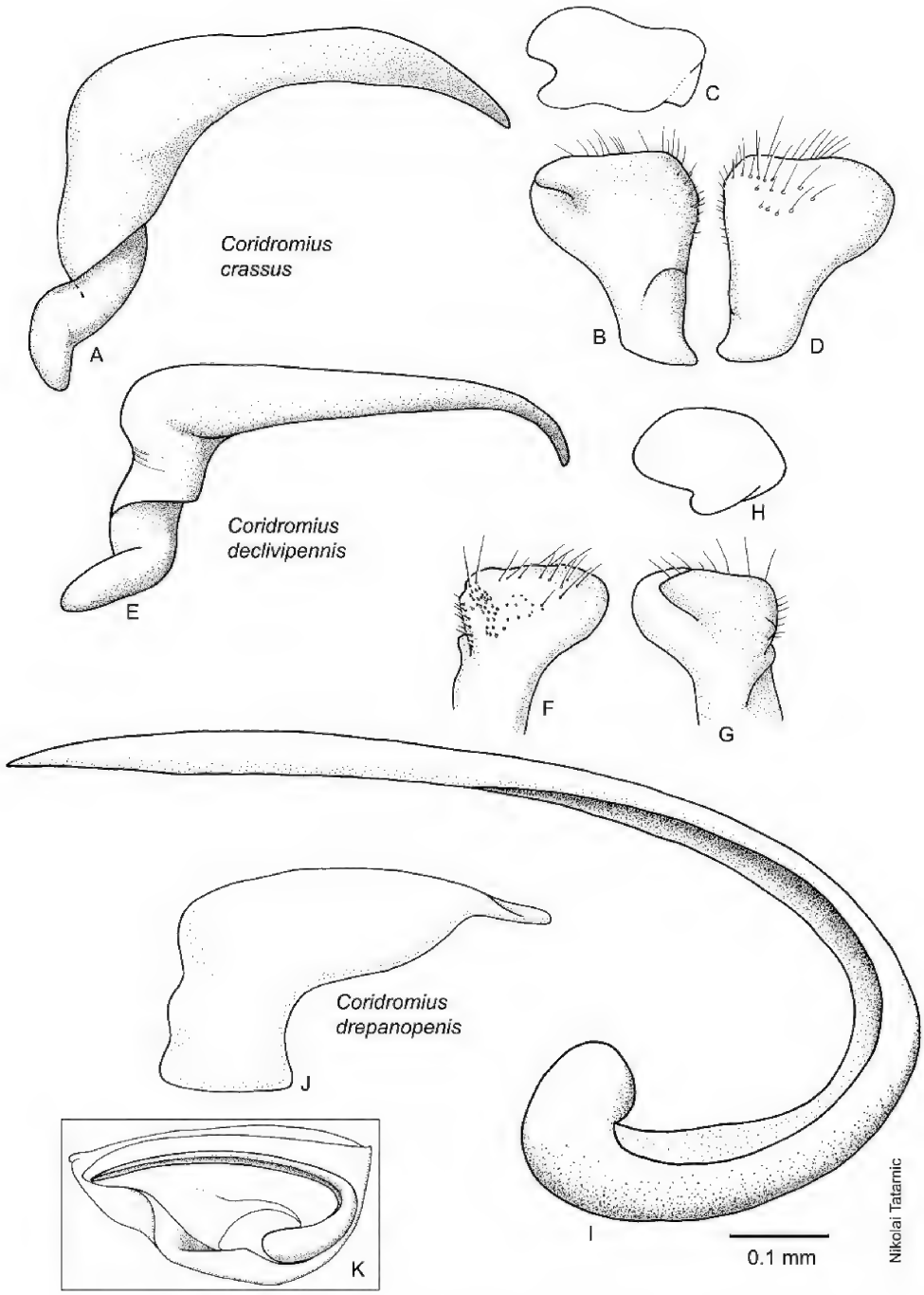


Fig. 10. Left and right parameres of *Coridromius* spp.: **A–D:** *C. crassus*. **E–H:** *C. declivipennis*. **I–K:** *C. drepanopenis*.

bent setae; male abdomen with patch of dense, conelike setae on the left posteroventral margins of segments VII and VIII (similar to *pteraulos*, figs. 16E–F). STRUCTURE (figs. 4, 6): Head: Frons roundly tumescent medially, merging with minor swelling on vertex; vertex with two minor swellings adjacent to eyes; posterior margin of head rounded, somewhat carinate. Thorax: Pronotum broad and steep, posteriorly rounded, lateral margins carinate, anterolateral margins depressed, not upturned, submarginal region of humeral angles excavate, posterior margin steeply declivent, callar region weakly present; proepisternum bilobed; posterior margin of metepimeron in the form of a broad, rounded lobe; metanotum prominent and flared; scutellum somewhat flattened. Hemelytra: Costal margin greatly flared medially, with raised L-shaped fascia at apex. Legs: Metatibial spines long and thick. Abdomen: Posterolateral margin of abdominal sternite II sharply angular. MALE GENITALIA (figs. 10A–D): Right paramere broad and rounded with thumblike lobe, appears U-shaped when viewed dorsally (figs. 10B–D); left paramere thick and elongate, sharply angled basally, then evenly curved and tapering to apex with a slight twist along its axis, curved at tip (fig. 10A); pygophore with long mesal suture and long fingerlike ventral apical process. FEMALE PARAGENITALIA: Abdominal tergite II asymmetrical, right lateral margin weakly tumescent, posterior margin sulcate.

ETYMOLOGY: The name *crassus*, meaning "thick" or "stout" in Latin, reflects the broad body of this insect.

HOST: No host records.

DISTRIBUTION: Known from northern Sulawesi (map 3).

PARATYPES: **INDONESIA: Sulawesi Utara:** Dumoga-Bone National Park, Danau Mooat, 0.75694°N 124.4625°E, 1300 m, May 1985, Royal Entomological Society of London: Project Wallace, 1♂ (AMNH_PBI 00177945) (BMNH). Dumoga-Bone National Park, Gunung Ambang Forest Reserve, near Kotamobagu, 0.55°N 123.98333°E, 1200 m, 18 Feb 1985, Royal Entomological Society of London: Project Wallace, 3♂ (AMNH_PBI 00177946, AMNH_PBI 00192742–AMNH_PBI 00192743), 2♀ (AMNH_PBI 00177947, AMNH_PBI 00177948) (BMNH).

Coridromius declivipennis Miyamoto and Yasunaga
Figures 4, 6, 10E–H, 11A, map 6

Coridromius declivipennis Miyamoto and Yasunaga, 1999: 35–37 (n. sp.).

DIAGNOSIS: Recognized by the following combination of characters: bilobed proepisternum; rounded and cleft right paramere; long left paramere, sharply curved at base; embolium angularly flared near cuneus. Similar to *crassus*, *nakatanii*, and *pteraulos* but with shorter ventral apical process on the pygophore than in *crassus* and *pteraulos*, and different hemelytral shape, and coloration to all three.

REDESCRIPTION: COLORATION (figs. 4, 6): Mostly light brown with orange and brown markings. Head: Yellow-brown to orange-brown; vittae absent; ocular margins and posterior margin of head yellow; three dark brown spots, one immediately above clypeus and one over each antenna; clypeus, gena, mandibular and maxillary plates slightly paler; buccula dark brown basally then becoming yellow; labrum orange-brown, labium yellow, brown apically. Antenna: AI dark brown, base and apex yellowed; AII light orange-brown with pale subapical annulation and dark brown apical annulation; AIII and AIV dark brown, yellow basally. Thorax: Pronotal collar yellow; pronotum mostly orange-brown with faint yellow medial stripe, yellow margins and faint yellowing at humeral angles; mesoscutum light orange-brown; scutellum orange-brown to dark brown, with faint yellow apex and sides; thoracic pleura mostly orange-brown, posterior margins yellowed; lobes of proepisternum yellow, ventral portion of posterior lobe dark brown. Hemelytra: Yellow-brown to dark brown, darker anteriorly, yellow posteriorly; clavus yellow at commissure; corium and embolium yellow from apex of claval commissure to costal fracture; cuneus yellow-brown to orange-brown, sometimes darker apically; membrane brown with dark brown veins. Abdomen: Mostly yellow-brown to orange-brown, sometimes with dark brown markings around spiracles. Legs: All coxae

pale yellow; pro- and mesofemora yellow, brown apically; metafemur yellow basally, becoming brown apically, with diagonal brown striping on outer surface, sometimes dark brown immediately below striping; tibia yellow, sometimes slightly brown basally. SURFACE AND VESTITURE (figs. 4, 6): Head weakly punctate laterally and medially, densely setose; pronotum, propleuron, metepimeron, scutellum, and hemelytra finely punctate, clothed in long, simple, white, decumbent setae; male with short, dense and thick conelike setae on the left posteroventral margins of abdominal segments VII and VIII. STRUCTURE (figs. 4, 6): Head: Frons tumescent medially, merging with punctate minor swelling on vertex; vertex with two minor swellings adjacent to eyes, shallow depressions behind each swelling; posterior margin of head rounded, weakly carinate. Thorax: Pronotum broad and steep, posteriorly rounded, finely punctate; margins carinate, anterolateral margins somewhat depressed, not upturned, submarginal region of humeral angles excavate; callar region weakly defined; proepisternum bilobed; posterior margin of metepimeron truncate, upper corner slightly extended and rounded; metanotum prominent and flared; scutellum somewhat flattened. Hemelytra: Costal margin carinate, distally expanded. Legs: Metatibial spines long and thick. Abdomen: When viewed laterally, posterolateral margin of segment II angular. MALE GENITALIA: (figs. 10E–H, 11A) Right paramere broad and rounded with thumblike lobe, paramere appears U-shaped when viewed dorsally; left paramere thick and elongate, sharply angled basally, then evenly curved and tapering to apex with a slight twist along its axis, curved at tip; pygophore with a long mesal suture; ventral apical process broad and short (figs. 10, 11A). FEMALE PARAGENITALIA: Abdominal tergite II asymmetrical, right lateral margin weakly tumescent, posterior margin sulcate.

REMARKS: Based on the modifications of the female dorsum, it is thought that males inseminate females dorsolaterally.

HOST: No host records.

DISTRIBUTION: Known from Kyushu, Japan (map 6).

PARATYPES: **JAPAN: Kyushu:** Okinawa Pref.: Iriomote Is. Funaura, 24.33333°N 123.81666°E, 10 May 1993, T. Yasunaga, 3♀ (AMNH_PBI 00189984) (ULB). Ishigaki Is. Mount Banna, 24.36666°N 124.16666°E, 08 May 1993, T. Yasunaga, 3♂ (AMNH_PBI 00189983) (ULB). 2♀ (AMNH_PBI 00185366) (USNM). 1♂, 1♀ (AMNH_PBI 00189996) (AM), 1♂, 3♀ (AMNH_PBI 00189997) (TYCN).

Coridromius drepanopenis, new species
Figures 4, 6, 10I–K, map 5

HOLOTYPE: Male: **MALAYSIA: Sabah:** Tenompok, 6.01777°N 116.48555°E, 637 m, 10–19 Feb 1959, T.C. Maa (AMNH_PBI 00041548) (BPBM type# 16726) (BPBM).

DIAGNOSIS: Recognized by its single proepisternal lobe, orange-brown coloration, punctate pronotum and extremely long, thin left paramere. The genitalia of *drepanopenis* are very similar to those of *prolixipenis*, but the latter is much darker in coloration and lacks punctures on the pronotum.

DESCRIPTION: COLORATION (figs. 4, 6): Head: Mostly light orange-brown, frons with faint, darker brown vittae; raised tubercles adjacent to eyes yellow; ocular margins and posterior margin of vertex with yellow piping; clypeus, mandibular and maxillary plates, and gena light orange-brown; buccula yellow-orange; labrum and labium orange-brown, darker brown apically. Antenna: AI pale orange-brown, with thin dark brown annulations at base and apex; AII light orange-brown with dark brown apical annulation; AIII and AIV dark brown, yellow basally. Thorax: Pronotal collar yellow, anterior margin dark brown; pronotum mostly orange-brown with faint yellow median stripe; margins with thin yellow piping; proepisternum yellow, remaining thoracic pleura orange-brown, posterior margins becoming yellow; mesoscutum orange-brown; scutellum orange-brown with faint dark brown markings on lateral margins and yellow markings laterally and apically. Hemelytra: Orange-brown, slightly lighter anteriorly and at cuneal fracture; clavus slightly darker than remainder of hemelytron; cuneus slightly yellow basally, becoming orange along outer and apical margins; membrane pale brown with darker brown veins. Abdomen: Uniformly yellow-orange; parameres glossy amber. Legs: Yellow-orange,

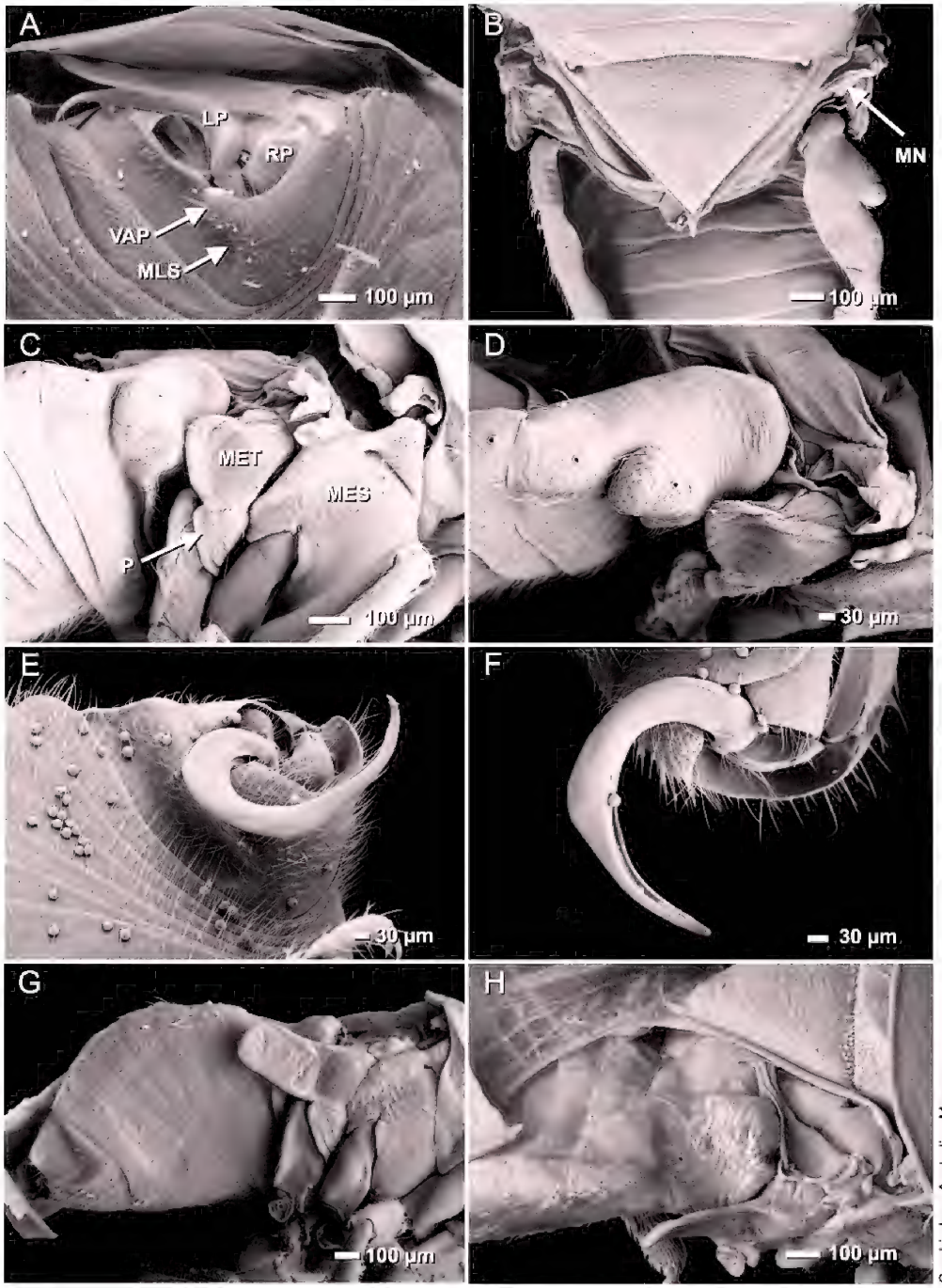


Fig. 11. Scanning electron micrographs: **A.** *C. declivipennis* ♂ genitalia, posterior view. **B–F:** *C. ephippius*: **B.** ♀ scutellum and abdomen, with hemelytra removed to expose paragenital swelling, dorsal view. **C.** ♀ thorax and abdomen, right lateral view. **D.** Detail of ♀ paragenital structure. **E.** ♂ genitalia, ventrolateral view. **F.** Detail of left paramere, dorsal view. **G–H:** *C. epithema*: **G.** ♀ thorax and abdomen, right lateral view. **H.** ♀ paragenital swelling of right laterotergites I and II, dorsal view. LP = left paramere, MES = mesepimeron, MET = metepimeron, MLS = mesal longitudinal suture, MN = metanotum, P = peritreme, RP = right paramere, VAP = ventral apical process.

metafemur faintly orange at apex, laterally with diagonal brown stripes. SURFACE AND VESTITURE (figs. 4, 6): Head smooth and glossy with widely spaced punctation medially on vertex, sparsely covered with short, white setae; pronotum with shallow, even punctation; scutellum slightly rugulose and impunctate; propleuron, metepimeron, and hemelytra impunctate; head and dorsum with sparse distribution of short, white, decumbent setae. STRUCTURE (figs. 4, 6): Head: Broad; frons weakly convex; vertex with minor swellings medially and adjacent to eyes; posterior margin of head carinate and weakly medially rounded. Thorax: Pronotum broad and convex, margins thinly carinate, anterolateral margins slightly upturned, submarginal region of humeral angles depressed, posterior margin thin, callar region undifferentiated; proepisternum unilobed; posterior margin of metepimeron truncate; metanotum not prominent and flared; scutellum swollen. Hemelytra: Costal margin thin, somewhat flared over its entire length and weakly sinuate. Legs: Metatibial spines short and thin. Abdomen: When viewed laterally, posterior margin of abdominal sternite II not angular. MALE GENITALIA (fig. 10I–K): Right paramere small and triangular (fig. 10J); left paramere extremely long, thin, curved, slightly twisted along its axis (fig. 10I), and extending beyond the margin of the pygophore (fig. 10K); posterior margin of pygophore biconvex, with fold on left forming a shallow groove (fig. 10K). FEMALE PARAGENITALIA: Unknown.

ETYMOLOGY: This species name, *drepanopenis*, is derived from Greek *drepanon* ("scimitar, sword") and Latin *penis* (lit., "tail") and reflects its extremely long, sword-like left paramere.

HOST: No host information.

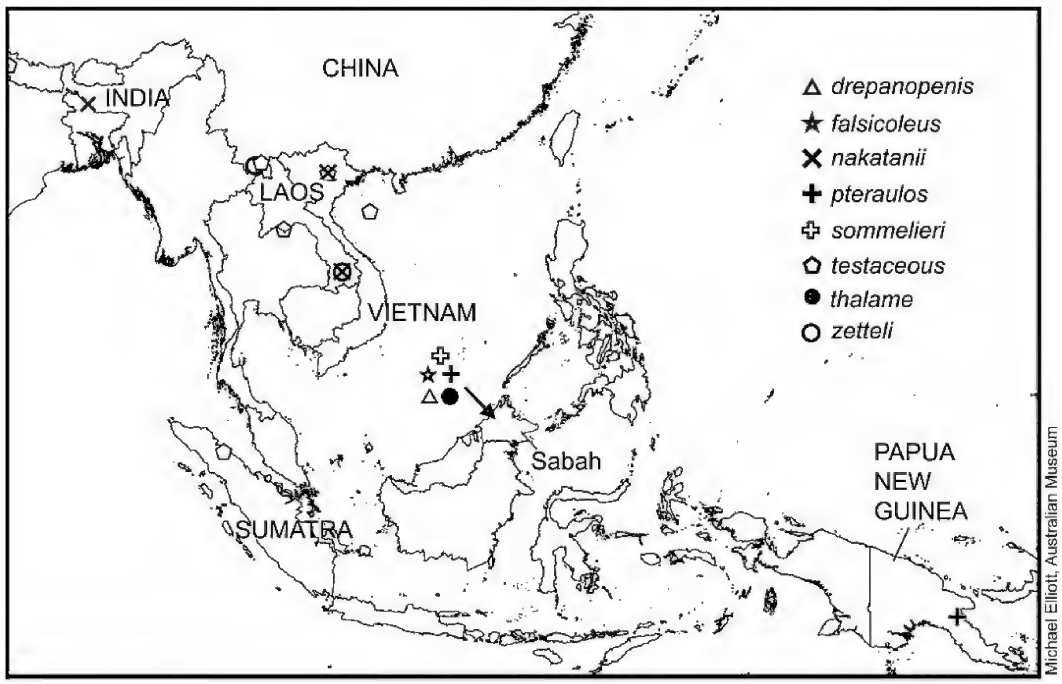
DISTRIBUTION: Known only from Sabah (map 5).

Coridromius ephippius, new species
Figures 4, 6, 11B–F, 12A–C, map 3

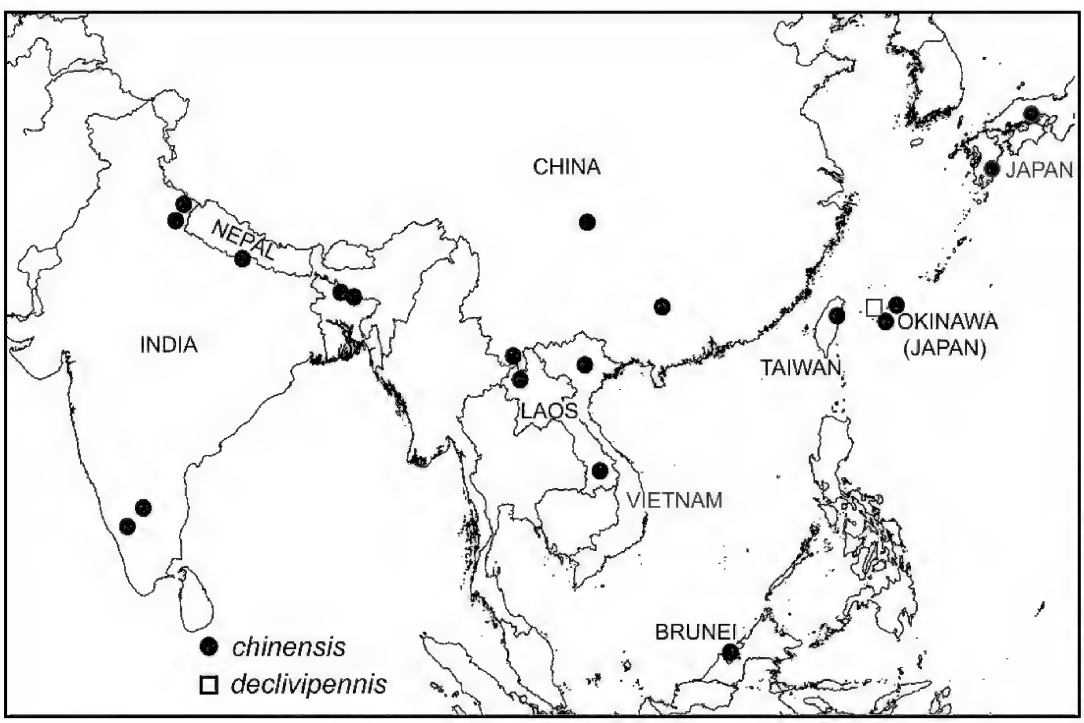
HOLOTYPE: Male: **PHILIPPINES: Albay Province:** Mt. Mayon, 16 km NW of Legaspi, 13.25666°N 123.685°E, 1200–1800 m, 12 May 1962, H.M. Torrevillas (AMNH_PBI 00041446) (BPBM type# 16727) (BPBM).

DIAGNOSIS: Readily distinguished by the female's unique paragenital structure (fig. 11B–D).

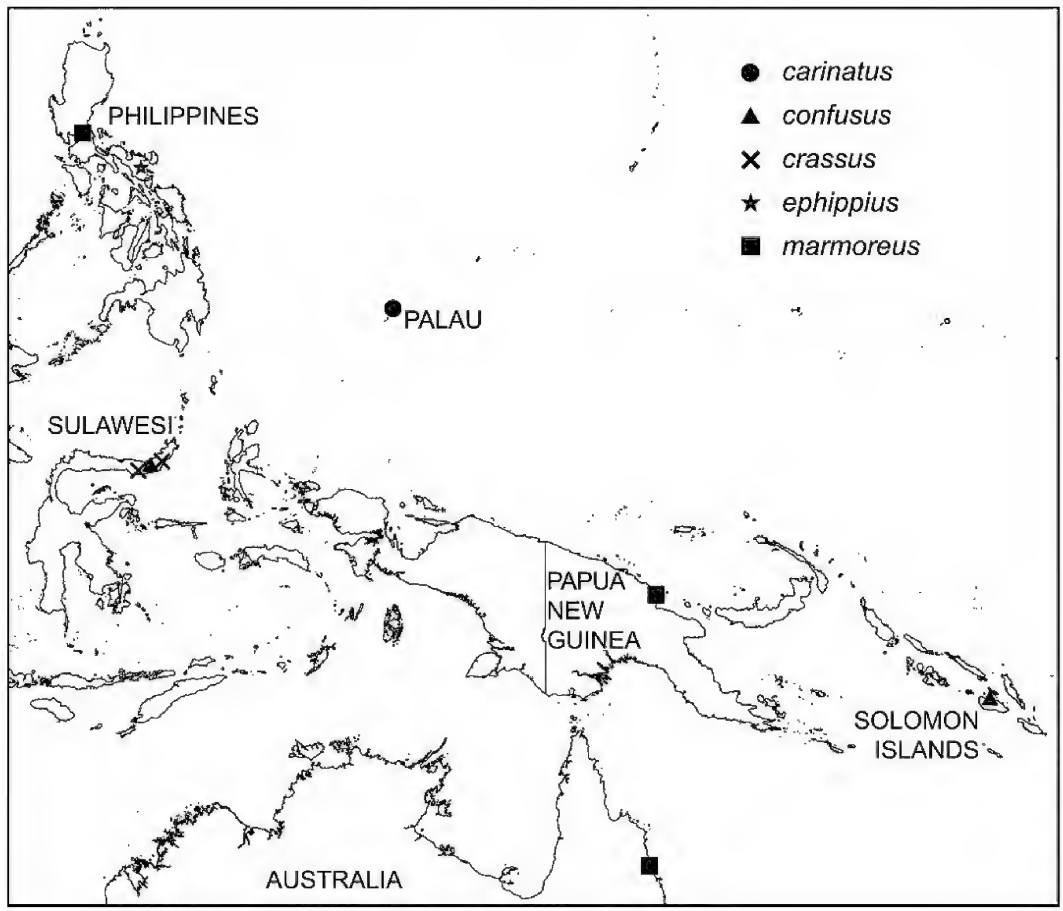
DESCRIPTION: COLORATION (figs. 4, 6): Head: glossy, mostly concolorous light brownish yellow, frons with faint brown vittae; with paired dark brown chevron-shaped markings on vertex behind weakly raised tumescences, sometimes also with median brown marking; labium pale, brown apically. Antenna: AI brownish yellow with dark brown annulations at base and apex; AII brownish yellow with dark brown annulation; AIII dark brown, pale at base; AIV dark brown. Thorax: Pronotal collar yellow, brown along anterior margin; pronotum brownish yellow to brownish orange, sometimes with two irregular dark brown markings immediately behind eyes, posterior margin also sometimes darkened; mesoscutum brown to brownish orange; scutellum brownish yellow to brownish orange with sometimes fused darker brown medial and lateral markings, anterior angles and lateroapical margins yellow to brownish orange; thoracic pleura brownish yellow. Hemelytra: Brownish yellow in most specimens, in others clavus sometimes brown apically, joining faint brown arc at apex of endocorium; membrane faintly brown with darker brown veins. Legs: Mostly uniform brownish yellow, metafemur mostly pale with eight or nine diagonal brown stripes, metatibia pale. Abdomen: Brownish yellow. SURFACE AND VESTITURE (figs. 4, 6): Head finely and shallowly punctate on vertex and adjacent to eyes; pronotum shallowly but distinctly punctate; propleuron, metepimeron, scutellum, and hemelytra impunctate; head and dorsum clothed with sparse distribution of short, white, decumbent setae; laterally projecting tumescence on right abdominal sternite II of female nodulose and setaceous. STRUCTURE (figs. 4, 6): Head: Frons broadly tumescent medially; with paired slightly raised tumescences adjacent to eyes, foveae behind tumescences shallow; posterior margin of vertex almost flat, not carinate. Thorax: Pronotum broad, margins somewhat carinate, anterolateral margins slightly upturned, not explanate; submarginal region of humeral angles weakly excavate; callar region undifferentiated; proepisternum unilobed;



Map 5. Distribution map of *C. drepanopenis*, *falsicoleus*, *nakatanii*, *pteraulos*, *sommelieri*, *testaceous*, *thalame*, and *zetteli*.



Map 6. Distribution map of *C. chinensis* and *declivipennis*. (Not shown: *C. chinensis* is also known from two specimens collected in northern Queensland, Australia.)



Map 7. Distribution map of *C. carinatus*, *confusus*, *crassus*, *ephippius*, and *marmoreus*.

posterior margin of metepimeron truncate; metanotum not prominent and flared. Hemelytra: Costal margin thin, flared over its entire length and straight to weakly sinuate. Legs: Metatibial spines thin and small. Abdomen: When viewed laterally, posterior margin of abdominal sternite II not angular. MALE GENITALIA (figs. 11E–F, 12A–C): Right paramere small and triangular (fig. 12B–C); left paramere thick and sharply angled at base, becoming straighter and thinner near apex (figs. 11E–F, 12A); ventral margin of pygophore biconvex, with distinct U-shaped groove on left side, no mesal suture or ventral apical process. FEMALE PARAGENITALIA (fig. 11B–D): Right laterotergites II and III fused with right sternites II and III to form a single dorsolateral swelling with laterally projecting tumescence (fig. 11B–D), posterior margin of sternite II flared and carinate (fig. 11C–D).

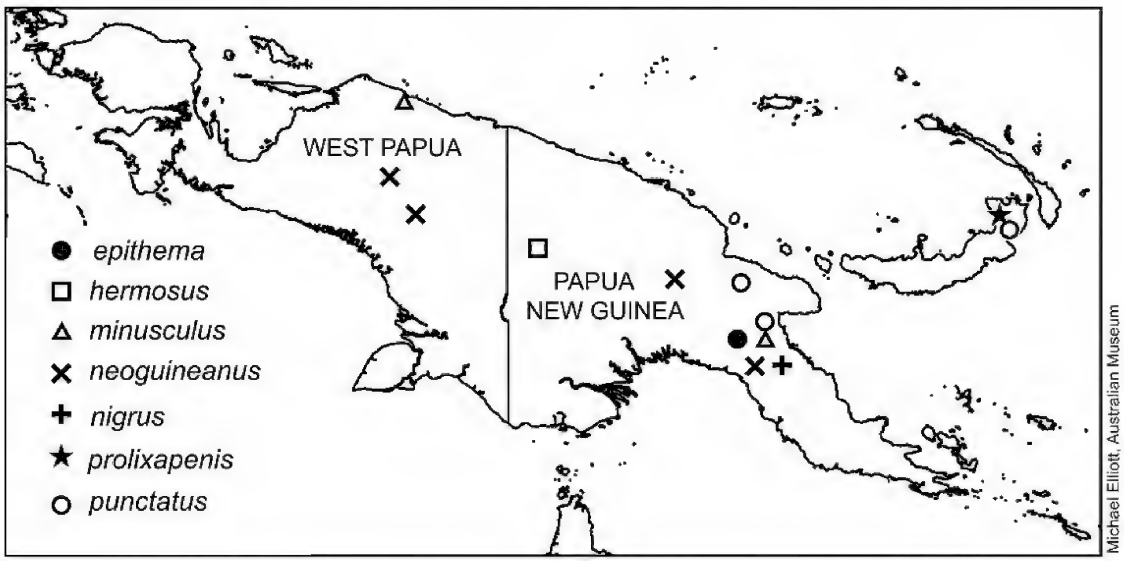
ETYMOLOGY: From the Latin *ephippium*, meaning "pack saddle", this name refers to the saddlelike shape of the female paragenital structure.

REMARKS: The paragenitalia of *ephippius* immediately distinguish it from all other species. As with so many other species, the exact function of such elaborate external modifications remains to be discovered.

HOST: No host records.

DISTRIBUTION: Philippines, Albay Province (map 3).

PARATYPES: **PHILIPPINES: Albay Province:** Mt. Mayon, 16 km NW of Lagaspi, 13.25666°N 123.685°E, 1200–1800 m, 12 May 1962, H.M. Torrevillas, 2♂ (AMNH_PBI 00041447, AMNH_PBI 00041448), 1♀



Map 8. Distribution map of *C. epithema*, *hermosus*, *minusculus*, *neoguineanus*, *nigrus*, *prolixipenis*, and *punctatus*.

(AMNH_PBI 00041449) (BPBM), 1♀ (AMNH_PBI 00041555) (AM); 15 May 1962, H. M. Torrevillas, 1♂ (AMNH_PBI 00041556) (BPBM). Mt. Mayon, 16 km NW of Lagaspi, 13.25666°N 123.685°E, 900–1800 m, 05 May 1962, H. M. Torrevillas, 6♂ (AMNH_PBI 00041557–AMNH_PBI 00041562), 2♀ (AMNH_PBI 00041563, AMNH_PBI 00041564) (BPBM). Mt. Mayon, 16 km NW of Lagaspi, 13.25666°N 123.685°E, 1900–2000 m, 13 May 1962, H. M. Torrevillas, 1♂ (AMNH_PBI 00041565) (BPBM).

Coridromius epithema, new species
Figures 4, 6, 11G–H, map 8

HOLOTYPE: Female: **PAPUA NEW GUINEA: Morobe:** Mount Kaindi, 7.35°S 146.68333°E, 2350 m, 11–18 Sep 1972, J.L. Gressitt (AMNH_PBI 00041549) (BPBM type# 16728) (BPBM).

DIAGNOSIS: Recognized by the following combination of characters: costal margin of hemelytron flared anteriorly, then sharply angled inward from the midpoint to the cuneus, extremely long metepimeral lobe, swollen and depressed right laterotergites II and III, and nearly uniform orange-brown coloration. This species appears very similar to *nigrus* and *hermosus*, both of which share similar paragenital structures, head shape, hemelytral shape, and metepimeral lobes. All three can be distinguished by their coloration, and *ephippius* differs further by having the longest metepimeral lobe, which is rounded apically (fig. 11G) but shorter and triangular (fig. 13E) in the other species.

DESCRIPTION: COLORATION (figs. 4, 6): Nearly uniform orange-brown. Head: Orange-brown; mandibular and maxillary plates, buccula, gena, ocular margins, and posterior margin of vertex slightly lighter orange; labium yellow-orange, brown apically. Antenna: AI and AII orange brown, AIII and AIV missing from specimen. Thorax: Pronotal collar light orange-brown; pronotum orange-brown with paler medial stripe and margins; mesoscutum and scutellum orange-brown; thoracic pleura mainly dark orange-brown with mesopleuron and posterior margins somewhat paler. Hemelytra: orange-brown, membrane somewhat lighter. Abdomen: Dark orange-brown. Legs: Coxae yellow-orange; femora and tibiae orange-brown; metafemur without contrasting dark stripes; tarsi somewhat yellowed. SURFACE AND VESTITURE (figs. 4, 6): Impunctate; scutellum weakly rugulose; head and dorsum sparsely coated with white, decumbent setae, most setae knocked off specimen. STRUCTURE (figs. 4, 6, 11G): Head: Wide; weakly

tumescent medially; lateral tubercles adjacent to eyes small and ill-defined, bordered posteriorly by shallow depressions; posterior margin of vertex nearly flat. Thorax: Pronotum broad and steep, anterolateral margins weakly upturned, posterior and lateral margins carinate, submarginal region of humeral angles shallowly excavated, callar region undifferentiated; proepisternum unilobed; metepimeron extended in a long, winglike lobe (fig. 11G); metanotum not prominent and flared. Hemelytra: Embolium thin, flaring outward from base then abruptly angling medially at midpoint. Legs: Metatibial spines short and thin. MALE GENITALIA: Unknown. FEMALE PARAGENITALIA (fig. 11G–H): Right laterotergites II and III swollen, desclerotized and depressed, posterior margin of right abdominal sternite II strongly carinate and flared outward, small paragenital opening between sternites II and III (fig. 11G–H).

ETYMOLOGY: The name *epithema*, meaning "lid" or "cover" in Greek, reflects the extended metepimeral lobe which partially covers the paragenitalia.

HOST: Unknown.

DISTRIBUTION: Mt. Kaindi, Papua New Guinea (map 8).

Coridromius falsicoleus, new species
Figures 4, 6, 13A–B, map 5

HOLOTYPE: Female: **MALAYSIA: Sabah:** Tenompok, 6.01777°N 116.48555°E, 637 m, 13 Feb 1959, T.C. Maa (AMNH_PBI 00041551) (BPBM type# 16729) (BPBM).

DIAGNOSIS: Recognized by the following: unique dark brown and yellow-orange color pattern; females with prominent paragenital opening on the right side of the abdomen within sternite II. The male of *falsicoleus* is unknown. *C. falsicoleus*, *nakatanii* and *sommelieri* are the only species with a prominent paragenital opening within the second abdominal segment, which in *falsicoleus* and *sommelieri* extends into the abdomen as a sclerotized copulatory tube. In the latter however, this copulatory tube is corkscrewed while in *falsicoleus* it is not.

DESCRIPTION: COLORATION (figs. 4, 6): Mostly dark brown with yellow markings. Head: Mostly dark brown, vittae faintly present on frons; mandibular plates yellow; maxillary plates and gena dark brown; buccula brown basally, pale along ventral margin; labrum light brown; labium light brown, dark brown apically. Antenna: AI dark brown, lighter brown basally; AII dark brown with two yellow bands, one broad band subbasally, and another, thinner band subapically; AIII and AIV dark brown, yellow basally. Thorax: Pronotal collar yellow; pronotum dark brown with median yellow stripe, posterior of humeral angles yellowed; thoracic pleura dark brown, posterior margins yellowed; mesoscutum dark brown; scutellum dark brown with three yellow spots laterally and apically. Hemelytra: Dark brown, claval commissure yellowed, corium with faint yellow U-shaped pattern. Legs: Pro- and mesofemur yellow, becoming dark brown at apex; metafemur brown, yellow basally, with 8–9 diagonal yellow stripes on outer surface; pro- and mesotibia with basal half dark brown, apical half yellow; metatibia dark brown; tarsi yellow. Abdomen: Chestnut brown, upper margins of each sternite dark brown, bordered posteriorly by yellow. SURFACE AND VESTITURE (figs. 4, 6, 13A): Head, pronotum, propleuron, metepimeron (fig. 20A), scutellum, hemelytra, and cuneus finely punctate; head and dorsum clothed in long, white, decumbent setae. STRUCTURE (figs. 4, 6, 13A): Head: Frons weakly tumescent medially, swelling of frons merging with minor medial swelling on vertex; posterior margin of vertex carinate and rounded. Thorax: Pronotum steep, posteriorly rounded, anterolateral margins not upturned, submarginal region of humeral angles strongly excavated, callar region undifferentiated; proepisternum bilobed; posterior margin of metepimeron extended as a short, broad, rounded lobe (fig. 13A); metanotum prominent and flared; scutellum flattened. Hemelytra: Embolium carinate and flared outward posteriorly. Legs: Metatibial spines long and thick. Abdomen: When viewed laterally, posterior margin of sternite II sharply angular. MALE GENITALIA: Unknown. FEMALE PARAGENITALIA (fig. 13A–B): Right abdominal sternite II with prominent paragenital opening, partly obscured by metepimeral lobe (fig. 13A–B), forms a thinly

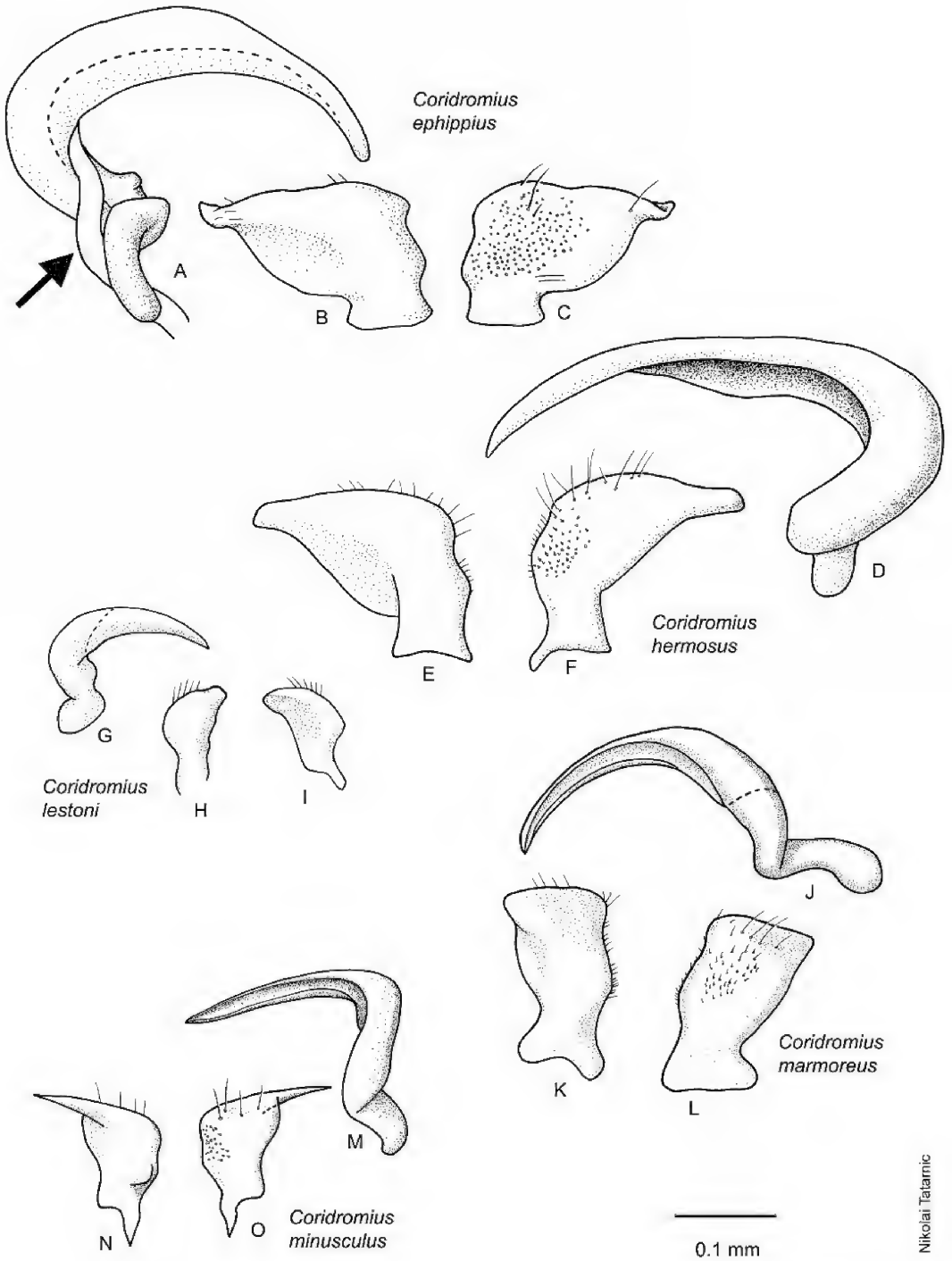


Fig. 12. Left and right parameres of *Coridromius* spp.: **A–C:** *C. ephippius* (arrow indicates aedeagus). **D–F:** *C. hermosus*. **G–I:** *C. lestoni*. **J–L:** *C. marmoreus*. **M–O:** *C. minusculus*.

sclerotized invagination into the abdominal cavity.

ETYMOLOGY: Derived from Latin (*falsi-*, "false", and *coleus*, "sheath" and thus "vagina"), the species name *falsicoleus* refers to this species' prominent paragenital opening.

HOST: Unknown.

DISTRIBUTION: *C. falsicoleus* has only been collected in Sabah (map 5).

PARATYPES: **MALAYSIA: Sabah:** Tenompok, 6.01777°N 116.48555°E, 637 m, 10–19 Feb 1959, T.C. Maa, 1♀ (AMNH_PBI 00041553) (BPBM); 13 Feb 1959, T.C. Maa, 1♀ (AMNH_PBI 00041552) (BPBM); 15 Feb 1959, T.C. Maa, 1♀ (AMNH_PBI 00041554) (BPBM).

Coridromius hermosus, new species
Figures 4, 6, 12D–F, 13C–H, map 8

HOLOTYPE: Male: **PAPUA NEW GUINEA: West Sepik Province:** Victor Emanuel Range: Bokubet, 5.16666°S 141.66666°E, 2850 m, 04–09 Jul 1976, J.L. Gressitt (AMNH_PBI 00041507) (BPBM type# 16730) (BPBM).

DIAGNOSIS: *C. hermosus* is recognized by the following characters: proepisternum unilobed; frons and vertex glossy black without vittae; vertex nearly flat; antenna entirely black; scutellum orange; metepimeron extended as a long triangular lobe; metafemur less strongly swollen than in other species; saddlelike female paragenital structure on laterotergites II and III. *C. hermosus*, *epithema*, and *nigrus* all share similar paragenitalia, yet can be told from one another by their diagnostic coloration and variations in metepimeral lobe shape.

DESCRIPTION: COLORATION (figs. 4, 6): Head: Mostly black above frontoclypeal suture, orange-yellow below; vertex and frons black with yellow piping along posterior margin and adjacent to eyes; vittae absent; mandibular plates orange; maxillary plates, buccula, and gena pale with orange flecks; clypeus orange to orange-brown; labium pale, brown apically. Antenna: Entirely black. Thorax: Pronotal collar yellow, fading to black along margins; pronotum with pale medial stripe and large subanterior lateral black maculations, remainder orange-brown, margins with distinct yellow piping; mesoscutum black; scutellum orange; mesepisternum orange-brown, lower half black and smooth. Hemelytra: Mostly brown; clavus mostly dark brown; corium mostly pale brown with obscure dark maculations; embolium flecked with orange to almost entirely orange; membrane dull brown, veins darker. Abdomen: Orange-brown, lateral margins orange-chestnut fading to yellow ventrally. Legs: Pro- and mesofemora chestnut apically, remainder pale; metafemur pale with 7 dark diagonal stripes; metatibia pale. SURFACE AND VESTITURE (figs. 4, 6): Impunctate; head and dorsum with sparse distribution of short, pale, white, decumbent setae. STRUCTURE (figs. 4, 6, 13C–E): Head: Broad, weakly tumescent medially; vertex without small tubercles adjacent to eyes; posterior margin of head nearly flat, with paired transverse foveae adjacent to eyes. Thorax: Pronotum broad, anterolateral margins weakly upturned and explanate, submarginal region of humeral angles weakly excavate, callar region undifferentiated; proepisternum unilobed (fig. 13C); posterior margin of metepimeron extended in a long, triangular lobe (fig. 13E); metanotum not flared (fig. 13D). Hemelytra: Costal margin thin and flared over its entire length and weakly sinuate. Legs: Metafemur only somewhat incrassate; metatibial spines short and thin. Abdomen: When viewed laterally, abdominal sternite II not distinctly angular. MALE GENITALIA (figs. 12D–F, 13G–H): Right paramere triangular and elongate (figs. 12E–F, 13G); left paramere sharply curved basally then continuing mostly straight, recurved at apex (figs. 12D, 13G); left ventral margin of pygophore with short mesal suture and broad ventral apical process (fig. 13H). FEMALE PARAGENITALIA (fig. 13E–F): Right laterotergites II and III swollen, laterotergite II transversely striate, depressed and membranous (fig. 13E–F), site of copulation thought to be intersegmental behind sternite II.

ETYMOLOGY: This species name is derived from Spanish, meaning "beautiful".

HOST: Unknown.

DISTRIBUTION: West Sepik Province, Papua New Guinea (map 8).

PARATYPES: **PAPUA NEW GUINEA: West Sepik Province:** Victor Emanuel Range:

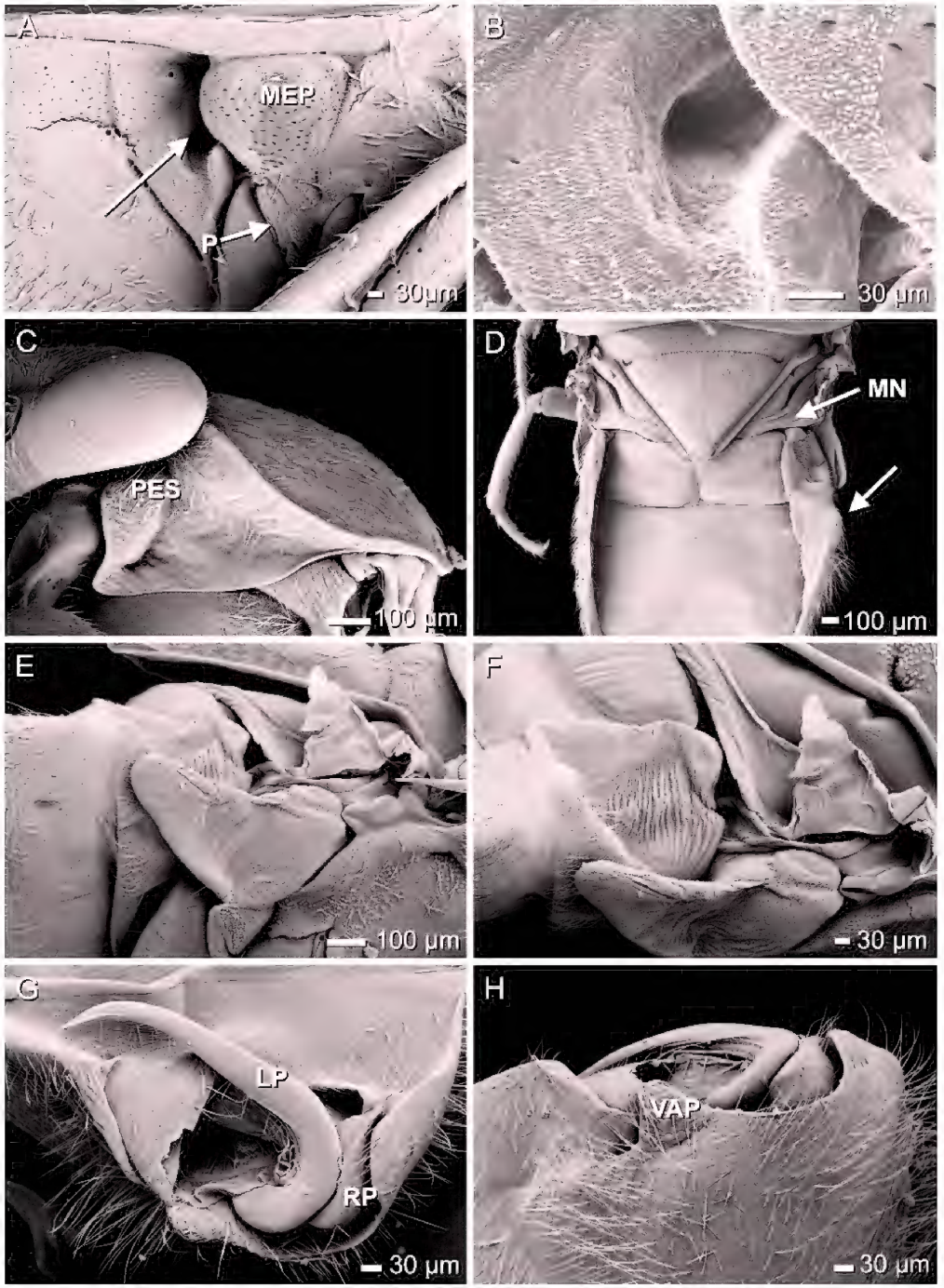


Fig. 13. Scanning electron micrographs: **A–B:** *C. falsicoleus*: **A.** ♀ thorax and abdomen, with arrow indicating paragenital opening, right lateral view. **B.** Detail of paragenital opening. **C–H:** *C. hermosus*: **C.** Head and pronotum, lateral view. **D.** ♀ scutellum and abdomen, with hemelytra removed to expose swollen right laterotergites II and III (arrow), dorsal view. **E.** ♀ metepimeron, right lateral view. **F.** Detail of right laterotergites II and III. **G.** ♂ genitalia, dorsal view. **H.** ♂ pygophore, ventral view. LP = left paramere, MEP = metepimeron, MES = mesepimeron, MET = metepimeron, MN = metanotum, P = peritreme, PES = proepisternum, RP = right paramere, VAP = ventral apical process.

Bokubet, 5.16666°S 141.66666°E, 2850 m, 04–09 Jul 1976, J.L. Gressitt, 4♂ (AMNH_PBI 00041508–AMNH_PBI 00041511), 5♀ (AMNH_PBI 00041512–AMNH_PBI 00041516) (BPBM).

Coridromius lestoni, new species
Figures 4, 6, 12G–I, map 2

HOLOTYPE: Male: **GHANA: Ashanti:** Tafo, 6.7333°N 1.6167°W, 278 m, 28 Jul 1967, D. Leston (AMNH_PBI 00178008) (BMNH).

DIAGNOSIS: Recognized by its small size, near-uniform dark brown coloration, uniquely flared hemelytra, and the distinctive groove running along the lateral abdominal tergites.

DESCRIPTION: COLORATION (figs. 4, 6): Mostly dark brown with yellow markings. Head: Mostly light to dark orange-brown, frons with faint, dark brown vittae; inner ocular margins and posterior margin of head with yellow piping; depressions above and below lateral tumescences dark brown; clypeus yellow to orange-brown, darker apically, with faint brown markings basally; mandibular plates yellow; maxillary plate and buccula dark brown with faint yellowing on lower margins; gena yellow; labrum red; labium orange-brown, becoming darker at apex. Antenna: AI yellow with broad subbasal dark brown annulation; AII light yellow-brown with yellow subapical annulation and dark brown annulation; AIII and AIV missing. Thorax: Pronotal collar dark brown; pronotum dark brown, only faintly paler along midline, lateral and posterior margins yellow; thoracic pleura dark orange-brown and dark brown; proepisternum with yellow lobes; posterior margin of propleuron yellow; posterior margin of metepimeron faintly yellow; mesoscutum dark brown; scutellum dark brown with yellow apex. Hemelytra: Dark brown, basally and laterally slightly paler; fascia at apex of embolium yellow; cuneus dark brown; membrane faintly brown with darker brown veins. Legs: Procoxae yellow; meso- and metacoxa dark brown, trochanters pale; pro- and mesofemora dark brown with yellow apices; metafemur light orange-brown to dark brown, with contrasting yellow and dark brown diagonal stripes on outer surface, three bothria colored yellow; pro- and mesotibiae yellow with two or three irregular dark brown markings basally, apically tinted orange; metatibia yellow with irregular dark brown banding; tarsi yellow. Abdomen: Orange-brown, posterior margins of sternites black, dorsolateral margins with black and yellow markings. SURFACE AND VESTITURE (figs. 4, 6): Head, hemelytra, and metepimeron impunctate; pronotum and scutellum with deep, widely spaced punctation; propleuron faintly punctate; head and dorsum clothed in long, white, decumbent setae. STRUCTURE (figs. 4, 6): Head: Frons weakly tumescent medially, swelling of frons extending to vertex; lateral swellings on vertex adjacent to eyes broad with well-defined depressions above and below; posterior margin of vertex carinate and rounded. Thorax: Pronotum broad, posteriorly rounded and declivent, anterolateral margins not upturned, depressed adjacent to callar region, submarginal region of humeral angles strongly excavate, callar region weakly defined; proepisternum bilobed; posterior margin of metepimeron truncate, apical angle forming a small, rounded lobe; metanotum prominent and flared; scutellum flattened. Hemelytra: Embolium carinate and sharply flared outward posteriorly, with a distinct raised fascia at apex of R+M vein; costal fracture deep. Legs: Metatibial spines long and thick. Abdomen: When viewed laterally posterior margin of sternite II not sharply angular; dorsolateral margins of laterotergites with shallow, sclerotized groove running lengthwise along the abdomen. MALE GENITALIA (fig. 12G–I): Right paramere small, triangular, and curved (fig. 12H–I); left paramere scythelike, apex broadly acute (fig. 12G); posterior margin of pygophore with long mesal suture and long, fingerlike ventral apical process. FEMALE PARAGENITALIA: No visible external paragenitalia.

ETYMOLOGY: Named after Dennis Leston, who collected both the holotype male and the paratype female.

REMARKS: The shape of the hemelytra and the longitudinal grooves along the dorsolateral margins of the abdomen are unique to this species.

HOST: Unknown.

DISTRIBUTION: This species is known only from Ghana (map 2).

PARATYPE: **GHANA: Ashanti:** Burso, 6.69°N 1.63°W, 08 Jul 1969, D. Leston, Pyrethrum knockdown, 1♀ (AMNH_PBI 00178009) (BMNH).

Coridromius marmoreus, new species
Figures 5, 6, 12J–L, 14A–C, map 3

HOLOTYPE: Male: **PHILIPPINES: Rizal:** Mount Montalban, Wa-wa Dam, 14.73016°N 121.185°E, 150–200 m, 02 Mar 1965, H.M. Torrevillas (AMNH_PBI 00041573) (BPBM type# 16731) (BPBM).

DIAGNOSIS: Easily distinguished from other species by its unique mottled coloration and thin, platelike pronotal margins. This species is superficially similar to *chinensis*, *confusus*, *minusculus*, and *punctatus*, however, none of these other species has spots along the pronotal or hemelytral margins. Additionally, the right paramere of *marmoreus* lacks a spined apophysis, the posterior margin of the pygophore lacks a mesal suture, the anterior lobe of the proepisternum is much shorter than the posterior lobe and the propleuron lacks punctation.

DESCRIPTION: COLORATION (figs. 5, 6): Head: With weak vittae on frons, pale with mottled brown maculations; clypeus with two submedial longitudinal brown stripes; mandibular plate yellow to orange above, brown below; maxillary plate yellow to orange, margins fading to brown; buccula yellow, somewhat brown to orange basally; labrum brown; labium orange-brown, darker brown apically. Antenna: AI cream with brown basal annulation; AII light orange-brown with slightly darker brown apical annulation; AIII and AIV brown. Thorax: Pronotal collar yellow with brown anterior and posterior margins; pronotum mostly yellow with brown punctures, humeral angles and callar region lightly brown, two small dark brown markings on anterior margin immediately behind eyes, two to four more transverse brown markings midway up pronotum, and two thin dark brown markings on posterior margin, lateral margins with three or four dark brown spots; mesoscutum brown; scutellum yellow-brown, mottled, with deep brown punctures, two dark brown marks on lateral margins; thoracic pleura mainly light orange-brown with yellow posterior margins; proepisternum with apices of both projections yellow, the remainder light brown; mesepisternum pale above, abruptly becoming dark brown at venter. Legs: Mostly yellow, pro- and mesofemora with a few small brown markings and an irregular brown band near apex; metafemur yellow at base with two or three diagonal brown stripes blending into irregular brown mottling midway along femur, bothria dark brown; tibiae pale with irregular brown banding, metatibial spines dark brown. Hemelytra: Mottled yellow and brown with patterned darker and paler markings; clavus brown at midpoint, with a dark brown spot at the tip and irregular dark brown marks throughout; endocorium and embolium with irregular brown markings; lateral margins of embolium with irregular dark brown spots; cuneus with irregular, dark brown line following inner and posterior margin, lateral margin pale; membrane tan with veins brown. Abdomen: Reddish brown to yellowish brown, with brown maculations on each segment below spiracles. SURFACE AND VESTITURE (figs. 5, 6, 14A–B): Head irregularly punctate, especially in shallow depressions adjacent to eyes; pronotum, scutellum, hemelytra, and metafemur irregularly punctate; propleuron impunctate (fig. 14A); metepimeron impunctate (fig. 14B); head and dorsum sparsely covered in short, pale, decumbent setae. STRUCTURE (figs. 5, 6, 14A–B): Head: Highly contoured; frons medially tumescent and laterally depressed, with minor swellings adjacent to eyes; depressions adjacent to eyes shallow; posterior margin of head broadly rounded medially, not carinate. Thorax: Pronotum broad, callar region weakly defined, anterolateral margins weakly explanate, lateral and posterior margins thin and platelike, submarginal region of humeral angles weakly excavated, posterior margin weakly upturned; proepisternum bilobed, with anterior projection much shorter than posterior (fig. 14A); posterior margin of metepimeron with small lobe projecting from upper corner (fig. 14B); metanotum prominent and flared. Hemelytra: Costal margin evenly rounded, thin, and platelike. Legs: Metatibial spines long and thick. Abdomen:

When viewed laterally, posterior margin of abdominal sternite II not angular. MALE GENITALIA (figs. 12J–L, 14C): Right paramere rectangular (fig. 12K–L); left paramere scythe-shaped, apex very slender (figs. 12J, 14C); posterior margin of pygophore without groove, fold, or mesal suture, ventral apical process absent (fig. 14C). FEMALE PARAGENITALIA: No visible external paragenitalia.

ETYMOLOGY: This species is named from the Latin *marmoreus*, referring to its mottled coloration.

HOST: Unknown.

DISTRIBUTION: Collected in large numbers in Luzon, Philippines, with single specimens also found in Papua New Guinea and north Queensland, Australia (map 3).

PARATYPES: **PHILIPPINES: Rizal:** Luzon, Montalban Dam, 14.73016°N 121.185°E, 16 Mar 1960, T. C. Maa, 1♀ (AMNH_PBI 00041624) (AM). Mount Montalban, Wa-wa Dam, 14.73016°N 121.185°E, 175 m, 02 Mar 1965, H. M. Torrevillas, 1♂ (AMNH_PBI 00041621) (AM). 3♂ (AMNH_PBI 00041577–AMNH_PBI 00041579) (AMNH). 3♂ (AMNH_PBI 00041574–AMNH_PBI 00041576), 1♀ (AMNH_PBI 00041580) (BPBM); 03 Mar 1965, H. M. Torrevillas, 3♂ (AMNH_PBI 00041581–AMNH_PBI 00041583), 1♀ (AMNH_PBI 00041584) (BPBM); 06 Mar 1965, H. M. Torrevillas, 2♂ (AMNH_PBI 00041588, AMNH_PBI 00041589), 1♀ (AMNH_PBI 00041590) (AMNH). 3♂ (AMNH_PBI 00041585–AMNH_PBI 00041587) (BPBM); 08 Mar 1965, H. M. Torrevillas, 2♀ (AMNH_PBI 00041592, AMNH_PBI 00041593) (AMNH). 1♂ (AMNH_PBI 00041591) (BPBM); 09 Mar 1965, H. M. Torrevillas, 2♀ (AMNH_PBI 00041594, AMNH_PBI 00041595) (AMNH). 1♀ (AMNH_PBI 00041596) (BPBM); 14 Mar 1965, H. M. Torrevillas, 2♀ (AMNH_PBI 00041597, AMNH_PBI 00041598) (BPBM); 16 Mar 1965, H. M. Torrevillas, 1♀ (AMNH_PBI 00041599) (BPBM); 17 Mar 1965, H. M. Torrevillas, 6♂ (AMNH_PBI 00041600–AMNH_PBI 00041605), 1♀ (AMNH_PBI 00041606) (BPBM); 18 Mar 1965, H. M. Torrevillas, 1♀ (AMNH_PBI 00041623) (AM). 1♂ (AMNH_PBI 00041607) (BPBM); 19 Mar 1965, H. M. Torrevillas, 1♂ (AMNH_PBI 00041608), 2♀ (AMNH_PBI 00041609, AMNH_PBI 00041610) (BPBM); 22 Mar 1965, H. M. Torrevillas, 1♀ (AMNH_PBI 00041611) (BPBM); 23 Mar 1965, H. M. Torrevillas, 3♀ (AMNH_PBI 00041612–AMNH_PBI 00041614) (BPBM); 24 Mar 1965, H. M. Torrevillas, 1♂ (AMNH_PBI 00041615), 2♀ (AMNH_PBI 00041616, AMNH_PBI 00041617) (BPBM); 25 Feb 1965, H. M. Torrevillas, 1♀ (AMNH_PBI 00041619) (AM). 1♂ (AMNH_PBI 00041618) (BPBM); 08 Mar 1965–12 Mar 1965, H. M. Torrevillas, 1♂ (AMNH_PBI 00041620) (AM); 04 Mar 1965, H. M. Torrevillas, 1♂ (AMNH_PBI 00041622) (AM).

OTHER SPECIMENS EXAMINED: **AUSTRALIA: Queensland:** 1 km SE of Mt. Cook, 15.3°S 145.16°E, 13 Oct 1980, T. Weir, 1♂ (AMNH_PBI 00201295) (QM). Packers Creek, via Portland Roads, 16.48333°S 145.46666°E, 06 Dec 1985, G. Monteith and D. Cook, Pyrethrum knockdown, 1♀ (QM). **PAPUA NEW GUINEA: Madang Prov.:** Baiteta, 5.017°S 145.75°E, 01 Jul 1996, O. Missa, Light Trap, 1♂ (ULB).

Coridromius minusculus Carvalho
Figures 5, 6, 12M–O, map 8

Coridromius minusculus Carvalho, 1987: 62–63.

DIAGNOSIS: Distinguished by the following combination of characters: small size; bilobed proepisternum; apex of scutellum somewhat swollen and rounded; mottled coloration; AI pale with basal dark brown annulation; AII with dark brown postmedial annulation; right paramere with sharp, triangular spicule; left paramere thin and scythe-like with gutter open its entire length. The female of *minusculus* is not known.

REDESCRIPTION: COLORATION figs. 5, 6): Head: Mottled light orange-brown and whitish yellow; with faint light brown vittae; depressions on vertex dark brown; clypeus whitish yellow with two irregular dark brown stripes; mandibular and maxillary plates whitish yellow, becoming dark brown along posterior margins; gena yellow; buccula whitish yellow, dark brown basally; labrum dark orange-brown, labium light orange-brown, darkened apically. Antenna: AI whitish yellow with dark brown annulation near base, AII light orange-brown with whitish subapical band followed by dark brown apical annulation, AIII and AIV dark brown with yellow bases. Thorax: Pronotal collar whitish yellow; pronotum whitish yellow with mottled orange-brown punc-

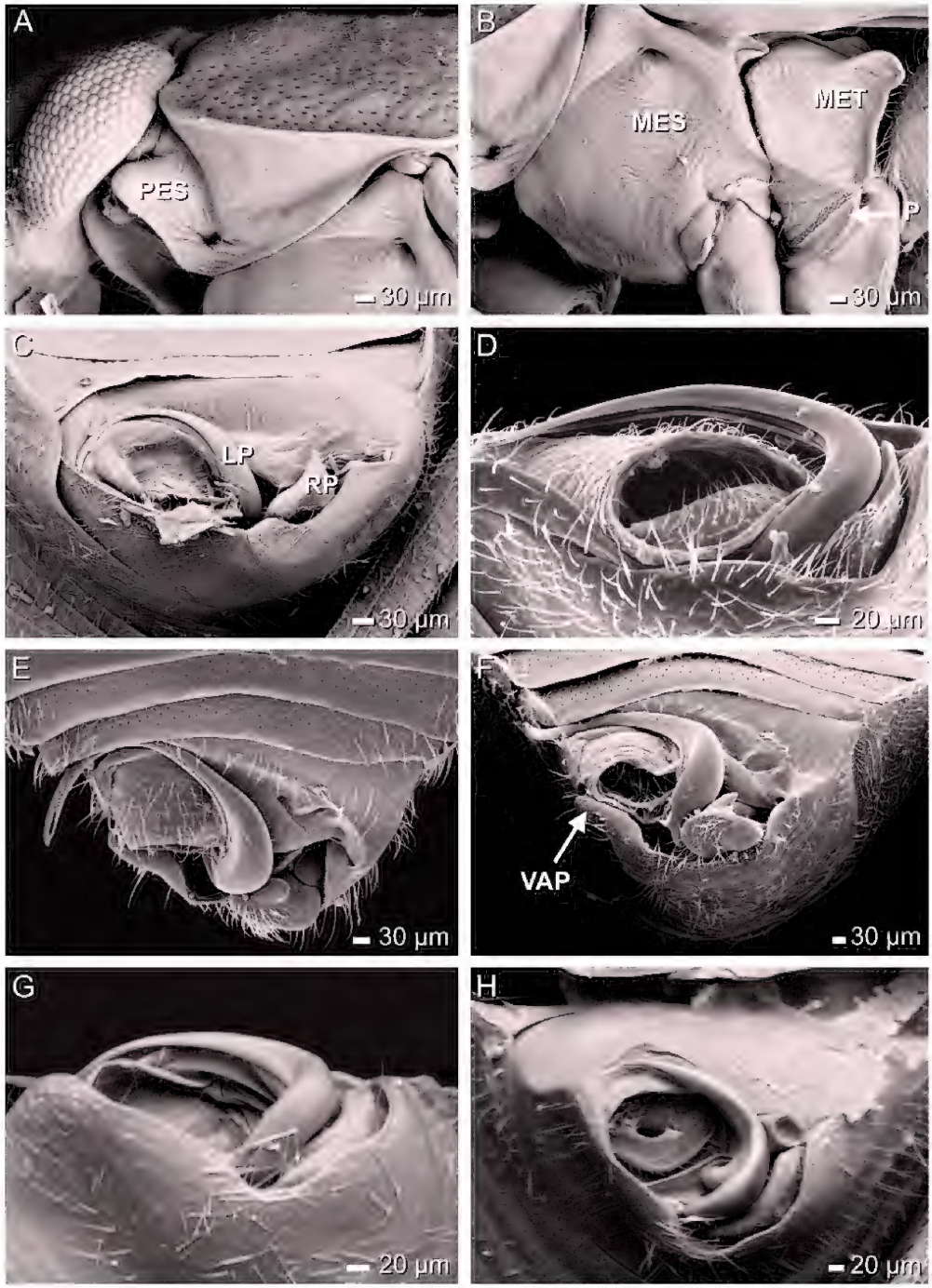


Fig. 14. Scanning electron micrographs: **A–C:** *C. marmoreus*: **A.** Head and pronotum, lateral view. **B.** Thorax, lateral view. **C.** ♂ genitalia, posterior view. **D.** *C. monotocopsis* ♂ genitalia, posteroventral view. **E–F:** *C. nakatanii*: **E.** ♂ genitalia, dorsal view. **F.** ♂ genitalia, posterior view. **G–H:** *C. neoguineanus*: **G.** ♂ genitalia, posteroventral view. **H.** ♂ genitalia, posterior view. LP = left paramere, MES = mesepimeron, MET = metepimeron P = peritreme, PES: proepisternum, RP = right paramere, VAP = ventral apical process.

tures, darkest around callar region, with two small dark brown markings along anterior behind eyes; with indistinct pale medial stripe; margins without pale piping; mesoscutum orange-brown; scutellum whitish yellow with mottled orange-brown punctures, apex pale; thoracic pleura dark orange-brown, whitish yellow along caudal margins; proepisternal lobes whitish yellow. Hemelytra: Mostly orange-brown, anterior portion of clavus slightly darker, becoming paler at commissure; corium with faint darker brown patches, becoming paler at apex; embolium with broad whitish-yellow subbasal and apical spots; cuneus light orange-brown, pale at apex; membrane brown, with pale veins bounded by irregular darker brown markings. Legs: Mostly whitish yellow with brown markings; coxae whitish yellow; pro- and mesofemora with broad, subapical irregular brown markings, bothria whitish yellow; metafemur laterally with four or five irregular diagonal brown stripes basally, becoming blotchy and indistinct apically, irregular whitish-yellow patch anterodorsally, ventrally with dark brown patch below stripes, apical lateral depressions orange-brown, bothria whitish yellow; all tibiae whitish yellow with irregular dark brown markings; metatibial spines dark brown. Abdomen: Light orange-brown, posterior margin of sternite II dark orange-brown. SURFACE AND VESTITURE (figs. 5, 6): Irregular depressions on head with deep punctures, somewhat coalescing; pronotum and propleuron deeply, irregularly punctate; scutellum deeply, irregularly rugulopunctate, impunctate along midline; metepimeron and hemelytra impunctate; clothed in long white setae. STRUCTURE (figs. 5, 6): Head: Highly contoured, frons strongly tumescent, bounded by irregular depressions and three minor swellings laterally and posteriorly; foveae adjacent to eyes deep, posterior margin of vertex medially rounded, not carinate; gena swollen; mandibular plate tumescent. Thorax: Pronotum broad and somewhat elongate, posteriorly rounded, steeply declivent, anterolateral margins weakly carinate; submarginal region of humeral angles strongly excavate; posterior of disc steeply declivent; posterior margin weakly medially cleft; callar region weakly developed; proepisternum bilobed; posterior margin of metepimeron truncate; metanotum prominent and flared; scutellum somewhat flattened, apex somewhat rounded. Hemelytra: Costal margin evenly rounded over its entire length. Legs: Metatibial spines long and thick. Abdomen: Posterolateral margin of abdominal sternite II not sharply angular. MALE GENITALIA (fig. 12M–O): Right paramere rounded with a long, spined apophysis (fig. 12N–O); left paramere scythe-shaped, slightly twisted along its axis, laterally compressed at base, thin apically, gutter open over entire length (fig. 12M); margin of pygophore with long mesal suture, ventral apical process present and long. FEMALE PARAGENITALIA: Female unknown.

REMARKS: Similar to *chinensis*, *confusus*, and *punctatus* (see remarks for *chinensis* above). Although the name refers to this species' diminutive size, given the amount of size variation we have seen in other species, we cannot be certain that *minusculus* is truly considerably smaller than other species.

HOST: One specimen has been collected from the family Cyperaceae, but we suspect that this represents a sitting record, as no other *Coridromius* species appear to feed on monocots (but see table 2 for another record on Cyperaceae).

DISTRIBUTION: Found in New Guinea (map 8).

HOLOTYPE: Male: **INDONESIA: Papua:** Boden, 11 km SE Oberfaren, 1.96666°S 138.73333°E, 1000 m, 7–17 Jul 1959, T.C. Maa, (AMNH_PBI 00042152) (BPBM).

OTHER SPECIMENS EXAMINED: **PAPUA NEW GUINEA: Morobe:** Bulolo Gorge, 7.19999°S 146.64999°E, 1100 m, 15 Nov 1981, J.L. Gressitt, (Cyperaceae), 1♂ (AMNH_PBI 00042147) (BPBM).

Coridromius monotocopsis, new species
Figures 1E–F, 5, 6, 14D, 15A–C, map 4

HOLOTYPE: Male: **AUSTRALIA: New South Wales:** Munmorah State Rec. Area, 33.21916°S 151.57083°E, 11 Dec 1996, L. Wilkie, *Monotoca elliptica* (Epacridaceae), (AMNH_PBI 00012127) (AM).

DIAGNOSIS: Recognized by the following combination of characters: proepisternum unilobed, metanotum not prominently flared;

posterior margin of pygophore biconvex, with fold on left side forming a shallow U-shaped groove, without small process on right margin of groove; light orange-brown coloration, males generally with dark brown coloring on side of abdomen. *C. monotocopsis* is similar to both Australian species *chenopoderis* and *pilbarensis*, and also resembles *bicolor* and the type species *variegatus*. Of the Australian species, *monotocopsis* is of more or less intermediate size between the other two, broader than *chenopoderis*, and typically uniformly light orange-brown in coloration. Males can be told apart by their relatively longer left paramere and much shallower U-shaped fold on the posterior margin of the pygophore, as well as by the distinctive dark brown band on the sides of the abdomen of most specimens.

DESCRIPTION: COLORATION (figs. 5, 6): Mostly orange-brown with darker brown markings, females usually paler than males. Head: Mostly orange-brown, becoming paler ventrally; dark brown vittae on frons; lateral margins bordering eyes and posterior margin of vertex yellow, lateral tumescences on vertex yellow, depressions behind tumescences dark brown; clypeus lighter orange-brown with faint median and lateral brown markings; maxillary plate and buccula yellow; labrum light orange-brown; labium yellow, brown apically. Antenna: AI yellow with thin light orange-brown bands apically and basally; AII orange-brown, not brown apically; AIII and AIV orange-brown, darker than AII. Thorax: Pronotal collar yellow-brown to orange-brown; pronotum orange-brown with faint yellow medial stripe and margins, in males callar region with irregular dark brown to black markings; mesoscutum orange-brown; scutellum orange-brown with white markings at basal angles and on either side of apex, in males sometimes with a broad, dark brown medial marking that sometimes extends over the entire scutellum; thoracic pleura orange-brown with yellow margins, in males sometimes becoming dark brown. Hemelytra: Yellow-brown to orange-brown, sometimes with faint reddish-orange markings at apex of embolium and on cuneus; in males inner margins of clavus and claval commissure dark brown, sometimes fusing laterally with dark brown chevron across corium; cuneus becoming yellow; membrane faintly brown with orange to brown veins. Legs: Coxae yellow; pro- and mesofemora yellow with faint, irregular subapical brown band; hind femur yellow with 8–9 dark brown diagonal stripes on outer surface, with broad, brown marking ventrally, darker in males; tibiae yellow to orange-yellow; tarsi brown apically. Abdomen: Yellow in females, sometimes slightly reddened along ovipositor; in males yellow with lateral dark brown triangular band tapering toward apex, sometimes with bright reddish-orange tinting on and around genital capsule. SURFACE AND VESTITURE (figs. 5, 6): Head glossy with shallow punctures and very short, decumbent setae; pronotum with shallow punctation; proepisternum, metepimeron and hemelytra impunctate; scutellum weakly rugulose; dorsum sparsely covered in short, simple, white, decumbent setae. STRUCTURE (figs. 5, 6): Head: Broad; frons weakly tumescent medially; with paired tubercles adjacent to eyes, bordered posteriorly by shallow depressions; posterior margin of head slightly rounded medially but otherwise flat. Thorax: Pronotum broad and rounded, margins thinly carinate, anterolateral margins weakly upturned, posterior margin not medially cleft, submarginal region of humeral angles weakly excavate; proepisternum unilobed; posterior margin of metepimeron truncate; metanotum not prominent and flared. Hemelytra: Lateral margin of embolium thin and evenly rounded, nearly straight. Legs: Metatibial spines long and thick. Abdomen: When viewed laterally, posterior margin of abdominal sternite II not distinctly angular. MALE GENITALIA (figs. 14D, 15A–C): Right paramere broad, short, triangular (fig. 15B–C); left paramere sickle-shaped, strongly attenuate (figs. 14D, 15A); posterior margin of pygophore with shallow folded groove to left of midline (fig. 14D). FEMALE PARAGENITALIA: No visible external paragenitalia; site of copulation unknown.

ETYMOLOGY: Named for its host plant, *Monotoca elliptica*.

HOST: Found almost exclusively on *Monotoca elliptica* (Epacridaceae).

DISTRIBUTION: Found primarily in eastern Australia, but also known from four speci-

mens collected on Norfolk Island, where we believe it has been introduced (map 4).

PARATYPES: **AUSTRALIA: New South Wales:** Booti Booti NP, 32.27972°S 152.52444°E, 09 Oct 1997, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 4♂ (AMNH_PBI 00012228, AMNH_PBI 00012228–AMNH_PBI 00012229, AMNH_PBI 00012229), 3♀ (AMNH_PBI 00012230–AMNH_PBI 00012232) (AM); 02 Apr 1998, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 1♂ (AMNH_PBI 00012233) (AM); 08 Oct 1997, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 1♀ (AMNH_PBI 00012234) (AM); 12 Nov 1996, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 3♂ (AMNH_PBI 00012235–AMNH_PBI 00012237) (AM); 30 May 1997, L. Wilkie, 1♂ (AMNH_PBI 00012238) (AM). Callala Beach, 35.015°S 150.701°E, 18 May 1997, G. Cassis, *Monotoca* sp. (Epacridaceae), 11♂ (AMNH_PBI 00012256–AMNH_PBI 00012266), 5♀ (AMNH_PBI 00012267–AMNH_PBI 00012271) (AM). Munmorah State Rec. Area, 33.21916°S 151.57083°E, 11 Dec 1996, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 32♂ (AMNH_PBI 00012123–AMNH_PBI 00012126, AMNH_PBI 00012128–AMNH_PBI 00012150, AMNH_PBI 00012197–AMNH_PBI 00012201), 46♀ (AMNH_PBI 00012151–AMNH_PBI 00012196) (AM); 18 Nov 1996, L. Wilkie, *Chrysanthemoides monilifera* (Asteraceae), 1♂ (AMNH_PBI 00012209) *Monotoca elliptica* (Epacridaceae), 6♂ (AMNH_PBI 00012202–AMNH_PBI 00012207), 1♀ (AMNH_PBI 00012208) (AM); 12 Oct 1997, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 4♀ (AMNH_PBI 00012210–AMNH_PBI 00012213) (AM); 11 Oct 1997, L. Wilkie, 1♀ (AMNH_PBI 00012214) (AM); 29 May 1997, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 2♂ (AMNH_PBI 00012215, AMNH_PBI 00012216) (AM); 04 Apr 1998, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 1♂ (AMNH_PBI 00012217) (AM); 14 May 1998, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 2♂ (AMNH_PBI 00012218, AMNH_PBI 00012219) (AM); 15 Dec 1996, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 1♂ (AMNH_PBI 00012220) (AM); 23 May 1998, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 1♂ (AMNH_PBI 00012221) (AM); 05 Apr 1998, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 1♂ (AMNH_PBI 00012222) (AM); 01 May 1997, L. Wilkie, 1♀ (AMNH_PBI 00012227) *Monotoca elliptica* (Epacridaceae), 1♂ (AMNH_PBI 00012223) (AM); 31 May 1997, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 1♂ (AMNH_PBI 00012224), 1♀ (AMNH_PBI 00012225) (AM); 27 Nov 1997, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 1♀ (AMNH_PBI 00012226) (AM). Myall Lakes NP, 32.57916°S 152.29083°E, 09 Oct 1997, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 5♂ (AMNH_PBI 00012240–AMNH_PBI 00012244), 8♀ (AMNH_PBI 00012245–AMNH_PBI 00012252) *Acacia longifolia* (Mimosaceae), 1♂ (AMNH_PBI 00012239) (AM); 29 Apr 1997, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 1♂ (AMNH_PBI 00012253) (AM); 10 Oct 1997, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 1♀ (AMNH_PBI 00012254) (AM); 24 May 1998, L. Wilkie, *Monotoca elliptica* (Epacridaceae), 1♀ (AMNH_PBI 00012255) (AM). Nullica Beach, 37.06°S 149.53°E, 31 May 1989, G. Cassis, 2♂ (AMNH_PBI 00012427, AMNH_PBI 00012428), 1♀ (AMNH_PBI 00015736) (AM). Royal National Park, Wattomolla Beach car park, 34.13334°S 151.1134°E, 29 m, 14 Nov 2001, Cassis, Schuh, Schwartz, Silveira, *Monotoca elliptica* (Sm.) R.Br. (Ericaceae), det. NSW staff NSW666424, 108♂ (AMNH_PBI 00015256–AMNH_PBI 00015333, AMNH_PBI 00015436–AMNH_PBI 00015465), 126♀ (AMNH_PBI 00015334–AMNH_PBI 00015435, AMNH_PBI 00015466–AMNH_PBI 00015489) (AM); 12 Apr 2004, G. Cassis, P. Tinerella, N. Tatarnic, N. Velez, K. McLachlan, *Monotoca elliptica* (Sm.) R.Br. (Ericaceae), 5♀ (AMNH_PBI 00114228–AMNH_PBI 00114232) (CNC). Queensland: East Woodmillar, 25.68333°S 151.6°E, 250 m, 17 Dec 1998, Monteith and Gough, 1♀ (AMNH_PBI 00178068) (QM). **Victoria:** Little Desert National Park, 5–6 km W of McDonald Hiway, 36.61668°S 141.1667°E, 150 m, 03 Nov 1995, Schuh and Cassis, *Melaleuca wilsonii* F. Muell. (Myrtaceae), det. P.G. Wilson 1996 NSW395985, 10♂ (AMNH_PBI 00015567–AMNH_PBI 00015576), 16♀ (AMNH_PBI 00015577–AMNH_PBI 00015592) (AM). *Brachyloma daphnoides* (Smith) Benth. (Epacridaceae), det. E.A. Brown 1996 NSW395984, 3♂ (AMNH_PBI 00002593–AMNH_PBI 00002595), 5♀ (AMNH_PBI 00002596–AMNH_PBI 00002600) (AMNH).

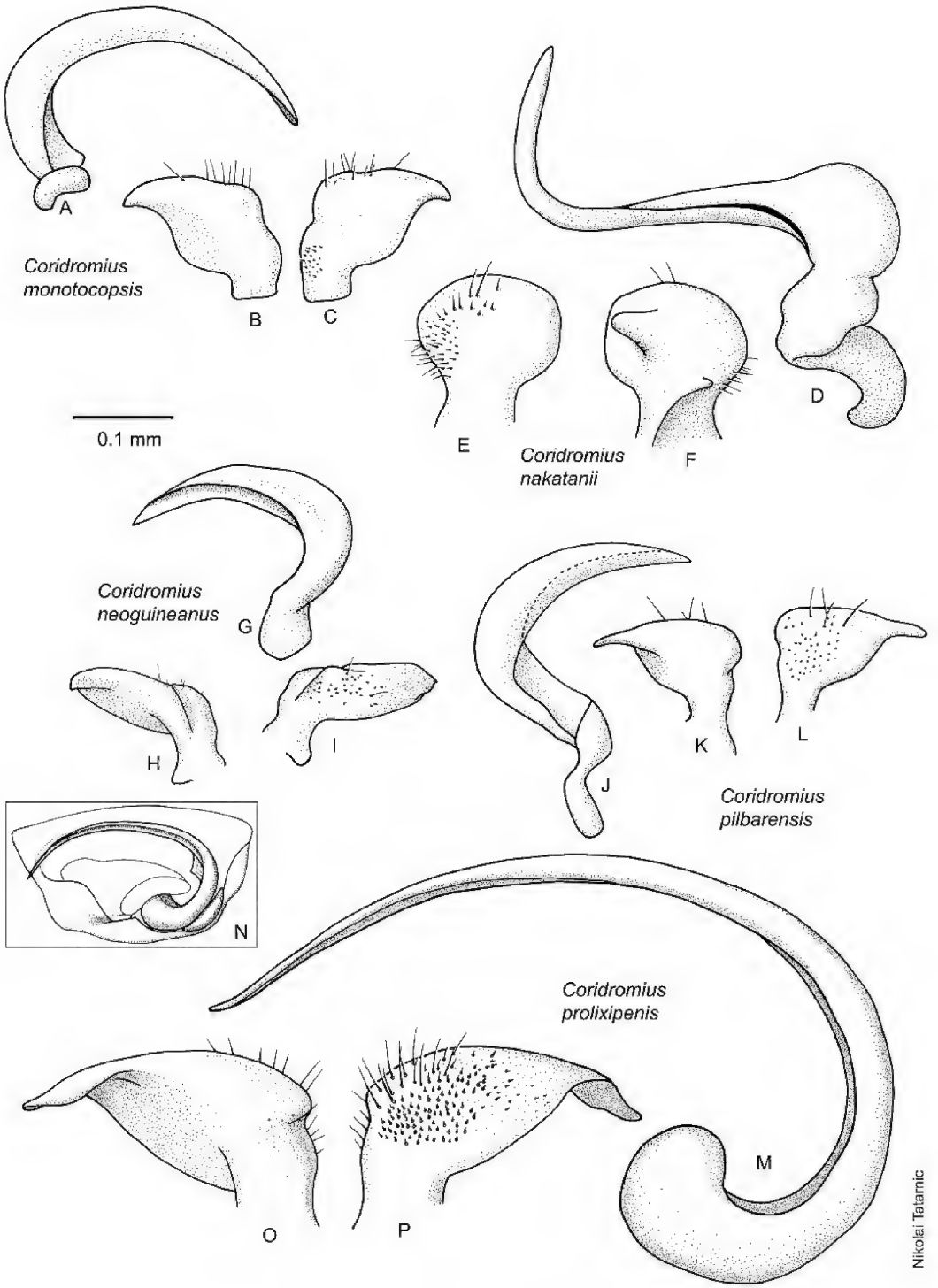


Fig. 15. Left and right parameres of *Coridromius* spp.: **A–C:** *C. monotocopsis*. **D–F:** *C. nakatanii*. **G–I:** *C. neoguineanus*. **J–L:** *C. pilbarensis*. **M–P:** *C. prolixipenis*.

OTHER SPECIMENS EXAMINED: **NORFOLK ISLAND:** 29.033°S 167.949°E, A.M. Lea, 4 adults (AMNH_PBI 00038583) (SAMA).

Coridromius nakatanii Chérot, Konstantinov and Yasunaga
Figures 5, 6, 14E–F, 15D–F, map 5

Coridromius nakatanii Chérot et al., 2004: 60–63.

DIAGNOSIS: Easily recognized by the strongly posteriorly flared embolium and long, thin left paramere, closed except at apex. *C. nakatanii* is superficially similar to *crassus*, *declivipennis*, and *pteraulos*, but all four can be told apart by the shape of the hemelytra and their coloration. Additionally, the left paramere of *nakatanii* is thinner, more twisted apically and enclosed until its apex, unlike in the other three species, and the female possesses a prominent paragenital opening within abdominal sternite II.

REDESCRIPTION: COLORATION (figs. 5, 6): Mostly brownish yellow to dark brown with yellow and dark brown markings. Head: Brownish yellow; very faint vittae on frons; lateral swellings adjacent to eyes yellow, merging with yellow ocular and posterior margins; clypeus yellow, brown apically, with one medial light brown spot and two lateral light brown stripes; gena, mandibular and maxillary plates yellow; buccula yellow, dark brown basally; labrum brown; labium yellow, brown apically. Antenna: AI dark brown, yellow at base and apex; AII light orange-brown, slightly darker at base, with dark brown medial band separated from broad, dark brown apical annulation by a thin yellow subapical annulation; AIII and AIV dark brown, yellow basally. Thorax: Pronotal collar yellow, darkened along anterior and posterior margins; pronotum mostly brownish yellow to nearly uniform dark brown, with yellow midline; paler specimens with two small dark brown spots on anterior margin behind eyes, two larger brown patches above callar region and the posterior margin somewhat darkened, darker specimens with faint yellowing submarginally at humeral angles, lateral and posterior margins yellow; mesoscutum in pale specimens orange-brown, becoming dark brown medially and laterally, in darker specimens uniform dark brown; scutellum brownish yellow to dark brown with yellow midline, apex and sides yellow, basally with dark brown markings medially and laterally; thoracic pleura brownish yellow with some faint darker brown markings, sometimes nearly uniform dark brown, posterior margins of pleura yellowed; proepisternal lobes yellow. Hemelytra: Brownish yellow with punctures darkened, in dark specimens nearly uniform dark brown; clavus darker anteriorly, claval commissure slightly pale; broad, pale specimens with dark brown patch extending across corium and embolium, broken transversely by yellow medial fracture, all specimens with yellow C-shaped pattern near costal fracture; veins yellow above costal fracture; cuneus light to dark brown; membrane pale brown, slightly brown subapically, with dark brown veins enclosing cell. Abdomen: Brownish yellow. Legs: All coxae pale yellow; pro- and mesofemora pale yellow; metafemur yellow with 8 diagonal dark brown stripes on outer surface, dark brown patch medioventrally, lateroapical depressions dark brown; tibiae yellow, metatibia slightly brown. SURFACE AND VESTITURE (figs. 5, 6): Head, pronotum, propleuron, metepimeron, scutellum and hemelytra finely punctate; head and dorsum clothed in long, white, decumbent setae. STRUCTURE: Head: Frons weakly tumescent medially, merging with minor median swelling on vertex; vertex with two minor swellings adjacent to eyes; posterior margin of head weakly medially rounded, somewhat carinate. Thorax: Pronotum broad and steep, lateral margins carinate, anterolateral margins not upturned, submarginal region of humeral angles excavate, posterior steeply declivent, callar region poorly defined; proepisternum bilobed; posterior margin of metepimeron in the form of a short, broadly rounded lobe; metanotum prominent and flared; scutellum flat dorsally. Hemelytra: Costal margin thinly carinate, greatly flared posteriorly. Legs: Metatibial spines long and thick. Abdomen: When viewed laterally, posterior margin of sternite II distinctly angular. MALE GENITALIA (figs. 14E–F, 15D–F): Right paramere broad and rounded with thumblike lobe, paramere appears U-shaped from above (figs. 14E–F, 15E–F); left paramere thick, elongate and sharply angled

basally, then evenly curved and tapering to apex with a slight twist along its axis, curved at tip, gutter tightly closed until apex (figs. 14E–F, 15D); pygophore with a long mesal suture and long, triangular ventral apical process (fig. 14E–F). FEMALE PARAGENITALIA: Female with prominent paragenital opening within abdominal segment II, opening directed caudally.

REMARKS: The possession of a prominent paragenital opening in abdominal sternite II is shared with *falsicoleus* and *sommelieri*, however in the latter two species this opening leads to a sclerotized copulatory tube projecting into the abdomen, whereas in *nakatanii* the paragenital opening is angled caudally.

HOST: Unknown.

DISTRIBUTION: Collected in Lao PDR, Vietnam, and India (map 5).

HOLOTYPE: Male: **LAO PEOPLE'S DEMOCRATIC REPUBLIC: Sekong Prov.:** Bolavens Plateau, N slope, ca. 10 km N. Mg Tha Theng, 15.5°N 106.43333°E, 500–700 m, 29–30 May 1996, Schillhammer (AMNH_PBI 00189978) (NHMW).

PARATYPES: **INDIA: Meghalaya:** West Garo Hills, Nokrek NP, 25.49333°N 90.325°E, 950–1250 m, 09–17 May 1996, E. Jendek and O. Sausa, 1♀ (AMNH_PBI 00189979) (NHMW). **VIETNAM:** Blao (Balao), 11.53333°N 107.8°E, 500 m, 14–21 Oct 1960, C. M. Yoshimoto, 1♀ (AMNH_PBI 00042605) (BPBM). Tam Dao NP, 21.4536°N 105.6436°E, 900 m, 17–18 Jun 1999, Y. Nakatani, 5♂ (AMNH_PBI 00190003–AMNH_PBI 00190007), 1♀ (AMNH_PBI 00190008) (TYCN).

Coridromius neoguineanus Carvalho
Figures 5, 6, 14G–H, 15G–I, map 8

Coridromius neoguineanus Carvalho, 1987: 63 (n. sp.).

DIAGNOSIS: Recognized by the following combination of characters: body light tan with dark brown spots; right paramere club-shaped; posterior margin of the pygophore with a U-shaped groove to right of centre. The coloration and right paramere shape of this species immediately distinguish it from all others.

REDESCRIPTION: COLORATION (figs. 5, 6): Light tan with yellow and dark brown markings. Head: Mostly light tan; frons without vittae; posterior margin of vertex and inner margins of eyes yellow; dark brown spot in middle of vertex; apex of clypeus dark brown, embrownment sometimes extending the length of clypeus, occasionally partway up frons; mandibular and maxillary plates, gena, and buccula light yellow; labrum dark brown; labium light yellow, brown apically. Antenna: AI yellow; AII yellow to light brown, with dark brown annulation; AIII and AIV dark brown. Thorax: Pronotal collar yellow; pronotum light tan with yellow medial stripe and posterior margin, two dark brown spots behind eyes and two more on disc; mesoscutum light tan; scutellum light tan with two dark brown spots, anterolateral corners and apex yellow; thoracic pleura light tan, posterior margins yellow; mesepisternum and metepimeron with darker brown markings. Hemelytra: Light tan, clavus generally darker; with transverse dark brown band arcing across hemelytra through apex of claval commissure, sometimes broken into separate dark brown markings; membrane pale, veins brown. Legs: Coxae yellow; pro- and mesofemora yellow with light orange-brown subapical marking; tibiae yellow; metafemur yellow with faint brown subapical band and 7–8 transverse stripes on outer side. Abdomen: Yellow with light orange-brown and dark brown markings. SURFACE AND VESTITURE (figs. 5, 6): Head and pronotum densely and finely punctate; scutellum weakly rugulose; propleuron, metepimeron, and hemelytra impunctate; head and dorsum sparsely clothed in short, simple, white setae. STRUCTURE (figs. 5, 6): Head: Frons weakly tumescent medially, nearly flat; posterior margin of head rounded, not carinate. Thorax: Pronotum broad, anterolateral angles weakly upturned and carinate, submarginal region of humeral angles weakly excavate, posterior margin weakly upturned, callar region undifferentiated; proepisternum unilobed; posterior margin of metepimeron truncate; metanotum not prominent and flared. Hemelytra: Costal margin thin and platelike, slightly rounded and flared over its entire length; cuneus impunctate. Legs: Metatibial spines short and thin. Abdomen: When viewed laterally, posterior margin of abdominal sternite II not sharply angular.

MALE GENITALIA (figs. 14G–H, 15G–I): Right paramere boot-shaped (fig. 15H–I); left paramere stout and sickle-shaped (figs. 14G–H, 15G); posterior margin of pygophore simple, with single distinct groove slightly to right of center (fig. 14G–H). FEMALE PARAGENITALIA: No visible external paragenitalia.

REMARKS: While the left paramere is similar in shape to that of many other species, the distinctive spotted coloration and unique boot-shaped right paramere set this species apart from others.

HOST: Unknown.

DISTRIBUTION: Known from Papua New Guinea and Western Papua, Indonesia (map 8).

HOLOTYPE: Male: **PAPUA NEW GUINEA: Western Highlands:** Minj, 5.85°S 144.66666°E, 1700 m, 1959, T.C. Maa (AMNH_PBI 00042151) (BPBM).

PARATYPES: **INDONESIA: Papua:** Guega, W. of Swart Valley, 3.6°S 138.41666°E, 1200 m, 15 Nov 1958, J.L. Gressitt, 1♀ (AMNH_PBI 00041463) (BPBM).

OTHER SPECIMENS EXAMINED: **INDONESIA: Papua:** Kulima, 4.41666°S 138.98333°E, 1400 m, 19–22 Feb 1960, T.C. Maa, 6 adults, sex undetermined (AMNH_PBI 00185365) (USNM). PAPUA NEW GUINEA: Morobe: Wau, 7.3333°S 146.71667°E, 1200 m, 23 Jan 1978, W.C. Gagne, 1♀ (AMNH_PBI 00041464), 5♂ (AMNH_PBI 00041465–AMNH_PBI 00041469) (BPBM).

Coridromius nigrus Carvalho
Figures 5, 6, map 8

Coridromius nigrus Carvalho, 1987: 64–65.

DIAGNOSIS: Recognized by its nearly uniform black coloration, long, triangular metepimeral lobe and distinctive paragenitalia. This species appears very similar to *epithema* and *hermosus*, both of which share similar paragenital structures, head shape and hemelytral shape, but differ in coloration.

REDESCRIPTION: COLORATION (figs. 5, 6): Nearly uniform reddish black. Head: Reddish black; mandibular plates and apex of clypeus tinted red; maxillary plate yellow; buccula and gena orange-brown; ocular margins and posterior margin of vertex yellow; labium yellow-orange, apex missing from specimen. Antenna: Grey-brown, AIII and AIV missing. Thorax: Pronotal collar black; pronotum reddish black, becoming more reddened laterally, posterior and lateral margins yellow-orange; mesoscutum and scutellum black with reddish tinting in basal and apical corners; thoracic pleura mainly reddish black, yellow-orange along posterior margins. Hemelytra: Reddish black, lighter laterally and apically; membrane dark grey. Abdomen: Reddish black. Legs: Coxae orange-brown; trochanters pale; pro- and mesofemora and tibiae reddish black; hind femur reddish black with faint black diagonal stripes; tarsi somewhat yellowed. SURFACE AND VESTITURE (figs. 5, 6): Impunctate, scutellum rugulose; head and dorsum with white, decumbent setae, most setae knocked off specimen. STRUCTURE (figs. 5, 6): Head: Wide; frons weakly tumescent medially; lateral tubercles adjacent to eyes small and ill-defined, bordered posteriorly by shallow depressions; posterior margin of vertex nearly flat. Thorax: Pronotum very broad, anterolateral angles weakly upturned, posterior and lateral margins carinate, submarginal region of humeral angles excavate, callar region undifferentiated; proepisternum unilobed; posterior margin of metepimeron extended in the form of a triangular lobe; metanotum not prominently flared. Hemelytra: Costal margin thin, flared out from base then abruptly angling medially at midpoint. Legs: Metatibial spines short and thin. Abdomen: Posterolateral margin of sternite II not angular. MALE GENITALIA: Male unknown. FEMALE PARAGENITALIA: Right laterotergites II and III swollen, desclerotized and medially depressed, posterior margin of right abdominal sternite II strongly carinate and flared outward (as in *epithema* and *hermosus*, figs. 11G–H, 13D–F).

HOST: Unknown.

DISTRIBUTION: Known from Wau, Morobe District, Papua New Guinea (map 8).

HOLOTYPE: Female: **PAPUA NEW GUINEA: Morobe:** Edie Creek, Wau, 7.31666°S 146.68333°E, 1700 m, 02 Apr 1966, J.L. Gressitt (AMNH_PBI 00042150) (BPBM).

Coridromius pilbarensis, new species
Figures 5, 6, 15J–L, 16A–B, map 4

HOLOTYPE: Male: **AUSTRALIA: Western Australia:** Pilbara Region: Base of Mt. Nameless, adjacent to gate, 22.72694°S 117.74916°E, 05 Jun 2004, M. Bulbert, N. Tatarnic and S. Lassau (AMNH_PBI 00012358) (AM).

DIAGNOSIS: Recognized by the following combination of characters: unique orange, brown, and yellow coloration; proepisternum unilobed; metanotum not prominently flared; posterior margin of pygophore biconvex, with prominent fold on left side forming U-shaped groove, with small apophysis on right margin of groove. Of the Australian species *chenopoderis*, *monotocopsis* and *pilbarensis*, the latter is the largest and generally most consistent in its coloration. Males are readily told by the small ventral apical process adjacent to the deep folded groove on the posterior margin of the pygophore, while females typically have a faintly greenish abdomen.

DESCRIPTION: COLORATION (figs. 5, 6): Mostly orange with brown markings above, yellow beneath. Head: Mostly orange-yellow to yellow with dark brown vittae on frons; lateral margins bordering eyes and posterior margin of vertex yellow, lateral tumescences on vertex yellow, depressions behind tumescences dark brown, sometimes with an additional dark brown marking in between; clypeus with irregular median and lateral brown markings; labrum light brown; labium yellow, brown apically. Antenna: AI yellow with narrow light brown bands apically and basally; AII yellow to yellow-orange, slightly brown apically; AIII and AIV orange-brown. Thorax: Pronotal collar yellow with brown to black anterior and posterior margins; pronotum orange with faint yellow midline and margins; callar region with irregular dark brown to black markings; disk sometimes slightly darkened, sometimes with broad dark brown to black markings; mesoscutum orange, black anteriorly; scutellum orange with dark brown markings anteromedially and laterally, apex yellowed laterally; thoracic pleura yellow-orange with yellow margins; prosternum dark brown to black ventrally. Hemelytra: Yellow-orange to orange, lighter apically; inner margins of clavus and claval commissure dark brown, fusing laterally with dark brown chevron across corium, sometimes with a faintly darkened spot; cuneus becoming yellow; membrane faintly brown with dark brown veins. Legs: Coxae yellow; pro- and mesofemora yellow to orange-yellow with faint, irregular subapical brown band; hind femur yellow with 8–9 dark brown diagonal stripes on outer surface, somewhat orange anteriorly below stripes; tibiae yellow to orange-yellow; tarsi brown apically. Abdomen: In females yellow or yellow-green; in males yellow with lateral brown and orange markings, with bright reddish-orange tinting on and around genital capsule. SURFACE AND VESTITURE (figs. 5, 6): Head glossy and shallowly punctate; pronotum shallowly punctate; propleuron, metepimeron, scutellum and hemelytra impunctate; head and dorsum sparsely covered in short, white, decumbent setae. STRUCTURE (figs. 5, 6): Head: Frons weakly tumescent medially; paired tubercles adjacent to eyes bordered posteriorly by shallow depressions; posterior margin of head slightly rounded medially but otherwise flat. Thorax: Pronotum broad and rounded, lateral margins thinly carinate, anterolateral angles weakly upturned, posterior margin medially cleft, submarginal region of humeral angles weakly excavate; proepisternum unilobed; posterior margin of metepimeron truncate; metanotum not prominent and flared. Hemelytra: Costal margin thin and weakly rounded, nearly straight. Legs: Metatibial spines long and thick. Abdomen: When viewed laterally, posterior margin of abdominal sternite II not distinctly angular. MALE GENITALIA (figs. 15J–L, 16A–B): Right paramere broad, short, triangular (fig. 15K–L); left paramere sickle-shaped, strongly attenuate (figs. 15J, 16A); posterior margin of pygophore with distinct fold on left forming a U-shaped groove (fig. 16A), the upper right corner forming a small process (fig. 16A–B). FEMALE PARAGENITALIA: No visible external paragenitalia; site of copulation unknown.

ETYMOLOGY: Named after the Pilbara Region, where the holotype was collected.

HOST: Most specimens have been collected from *Melaleuca* spp. (Myrtaceae), but *pilbar-*

ensis has also been collected in large numbers on *Dodonaea viscosa angustissima* (Sapindaceae) (see table 2).

DISTRIBUTION: Found on both the west and east coasts of Australia (map 4).

PARATYPES: **AUSTRALIA: New South Wales:** 27 km W of Retreat (30 km E Manilla), 30.66668°S 150.8333°E, 350 m, 24 Oct 1995, Schuh and Cassis, *Schinus areira* L. (Anacardiaceae), det. P.G. Wilson 1996 NSW395924, 1♂ (AMNH_PBI 00012432), 1♀ (AMNH_PBI 00012433) (AM). Palm Beach, Sydney, 33.598°S 151.326°E, 16 Oct 1988, Richard Bejsak, 1♀ (AMNH_PBI 00012441) (AM). **Western Australia:** 11 km N of Coolgardie-Esperance Hiway on Kambalda Road, 31.25231°S 121.5899°E, 320 m, 18 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Melaleuca sheathiana* W. Fitzg. (Myrtaceae), det. Perth staff PERTH-05671396, 2♂ (AMNH_PBI 00012328, AMNH_PBI 00012329), 1♀ (AMNH_PBI 00012330) (AM). 17 mi N of Paynes Find, 29.01°S 117.68°E, 400 m, 10 Mar 1962, E. S. Ross and D. Q. Cavagnaro, 1♂ (AMNH_PBI 00002644) (AMNH). 20.6 km S of Norseman-Lake King Road on Lake King-Cascades Road, 33.16284°S 120.2813°E, 400 m, 22 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Gastrolobium spinosum* Benth. (Papilionaceae), det. Perth staff PERTH-05671736, 1♀ (AMNH_PBI 00012331) (AM). 3 km S of Kojonup, Sampson Road, 33.87088°S 117.1648°E, 310 m, 08 Dec 1997, Schuh, Cassis, Brailovsky, Asquith, *Melaleuca rhaphiophylla* Schauer (Myrtaceae), det. Perth staff PERTH-05879183, 1♀ (AMNH_PBI 00012429) (AM). 31.3 km N of Ravensthorpe, 33.36519°S 119.8792°E, 500 m, 05 Nov 1996, Schuh and Cassis, *Santalum lanceolatum* R.Br. (Santalaceae), det. Perth staff PERTH05236665, 3♂ (AMNH_PBI 00012341–AMNH_PBI 00012343), 1♀ (AMNH_PBI 00012344) (AM). 1♂ (AMNH_PBI 00002527), 11♀ (AMNH_PBI 00002528–AMNH_PBI 00002538) (AMNH). 33.3 km S of Norseman, 32.46461°S 121.6778°E, 300 m, 19 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Santalum acuminatum* R. Br. (Santalaceae), det. Perth05671094, 8♂ (AMNH_PBI 00012272–AMNH_PBI 00012279), 7♀ (AMNH_PBI 00012280–AMNH_PBI 00012286) (AM). 4.3 km N of Peak Charles National Park, 32.81408°S 121.2114°E, 200 m, 20 Nov 1999, R.T. Schuh and G. Cassis, *Dodonaea viscosa angustissima* (Sapindaceae), det. Perth staff PERTH-05670705, 1♂ (AMNH_PBI 00012430) (AM). 43 km N of Norseman, 31.85648°S 121.6414°E, 300 m, 19 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Santalum acuminatum* (R.Br.) A.DC. (Santalaceae), det. Perth staff PERTH-05671094, 6♂ (AMNH_PBI 00012333–AMNH_PBI 00012338), 2♀ (AMNH_PBI 00012339, AMNH_PBI 00012340) (AM). *Atriplex bunburyana* F.Muell. (Chenopodiaceae), det. Perth staff PERTH05671205, 7♂ (AMNH_PBI 00002565–AMNH_PBI 00002571), 9♀ (AMNH_PBI 00002572–AMNH_PBI 00002580) (AMNH). 56.6 km W of Yalgoo, 28.42397°S 116.1233°E, 600 m, 27 Oct 1996, Schuh and Cassis, *Melaleuca uncinata* R.Br. (Myrtaceae), det. Perth staff PERTH05120640, 1♀ (AMNH_PBI 00012345) (AM). Augusta, 34.34212°S 115.1661°E, 30 m, 04 Dec 1999, R.T. Schuh and G. Cassis, 1♂ (AMNH_PBI 00012297) (AM). Cosy Corner Beach East, Torbay Sound, W of Albany, 35.06033°S 117.6446°E, 2 m, 01 Dec 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Santalum acuminatum* R. Br. (Santalaceae), det. Perth staff PERTH05677094, 11♂ (AMNH_PBI 00002549–AMNH_PBI 00002559), 5♀ (AMNH_PBI 00002560–AMNH_PBI 00002564) (AMNH). Hamersley Inlet Campground, sea level, 33.95786°S 119.91456°E, 28 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Scaevola crassifolia* Labill. (Goodeniaceae), det. Perth staff PERTH05672295, 1♀ (AMNH_PBI 00012332) (AM). Lake Magenta Road, 4 km N of South Coast Hiway, 33.77872°S 119.2887°E, 400 m, 07 Dec 1997, Schuh, Cassis, Brailovsky, Asquith, *Melaleuca hamulosa* Turcz. (Myrtaceae), det. Perth staff PERTH05054567, 5♀ (AMNH_PBI 00012324–AMNH_PBI 00012327, AMNH_PBI 00012431) (AM). *Melaleuca hamulosa* Turcz. (Myrtaceae), det. Perth staff PERTH-05054567, 1♀ (AMNH_PBI 00002745) (AMNH). Mt. Lindesay, 23 km NW of Denmark, 34.85058°S 117.2767°E, 100 m, 17 Dec 1997, Schuh, Cassis, Brailovsky, *Agonis linearifolia?* (DC.)Sweet (Myrtaceae), det. Perth staff PERTH05095360, 1♂ (AMNH_PBI 00002539) (AMNH). Peak Charles National Park Campground, 32.88335°S 121.1703°E, 300 m, 20 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Melaleuca uncinata* R.Br. (Myrtaceae), det. Perth staff PERTH05670721, 4♂ (AMNH_

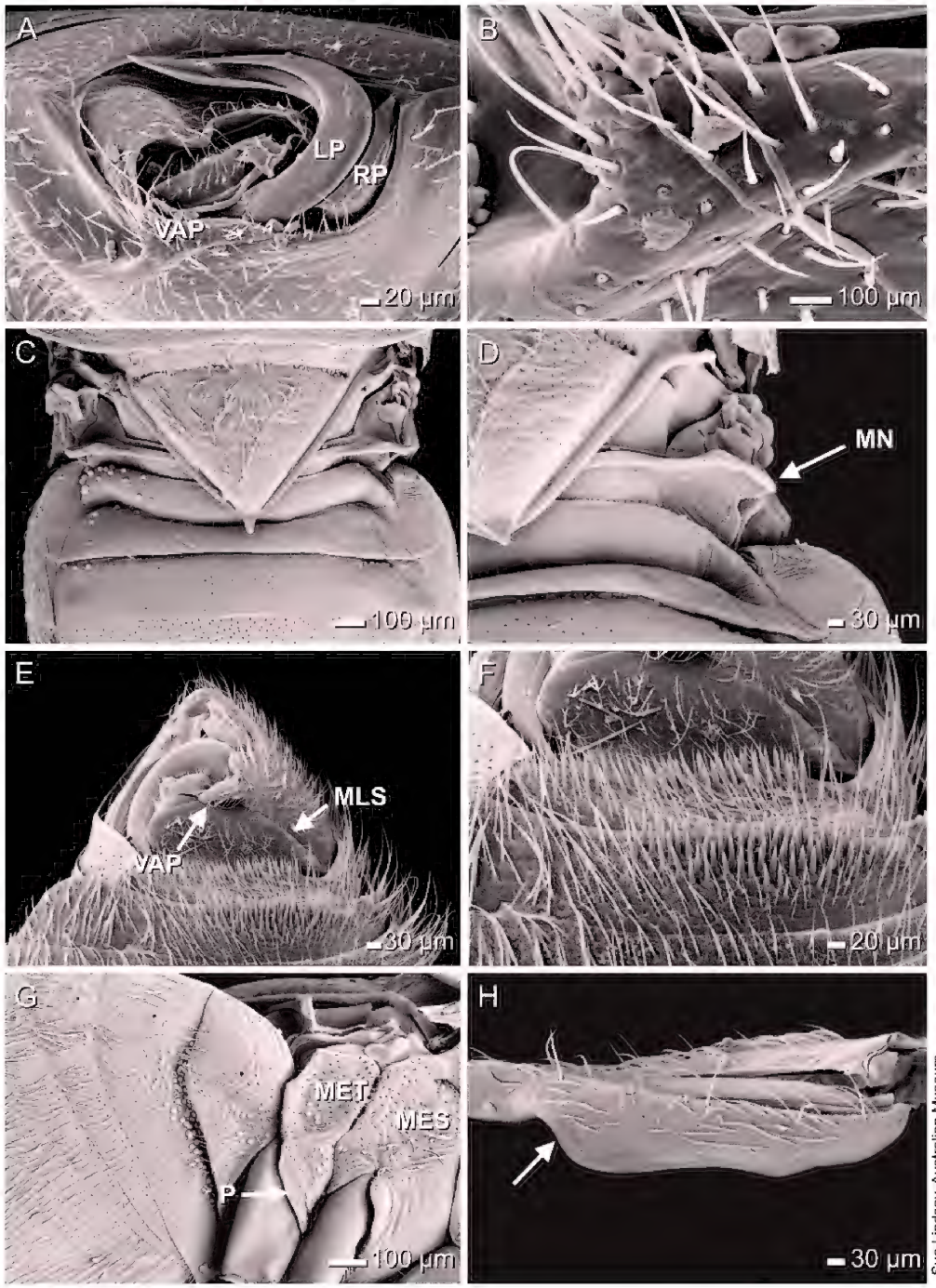


Fig. 16. Scanning electron micrographs: **A–B:** *C. pilbarensis*: **A.** ♂ genitalia, posterior view. **B.** ♂ detail of ventral apical process of pygophore. **C–H:** *C. pteraulos*: **C.** ♀ scutellum and abdomen, wings removed, dorsal view. **D.** Detail of ♀ dorsum, showing flaring of metanotum. **E.** ♂ genitalia and abdomen, posterolateral view. **F.** Detail of conelike setae on ♂ abdominal sternites VII and VIII, **G.** ♀ thorax and abdomen, right lateral view. **H.** ♀ anterior of right embolium, lateral view. Arrow indicates half-tube–shaped margin. LP = left paramere, MES = mesepimeron, MET = metepimeron, MLS = mesal longitudinal suture, MN = metanotum, P = peritreme, RP = right paramere, VAP = ventral apical process.

PBI 00012287–AMNH_PBI 00012290), 6♀ (AMNH_PBI 00012291–AMNH_PBI 00012296) (AM). *Dodonaea viscosa angustissima* (DC.) J.G. West (Sapindaceae), det. Perth staff PERTH05670705, 8♂ (AMNH_PBI 00012298–AMNH_PBI 00012305), 18♀ (AMNH_PBI 00012306–AMNH_PBI 00012323) (AM). Pilbara Region: Base of Mt Nameless, adjacent to gate, 22.72694°S 117.74916°E, 05 Jun 2004, M. Bulbert, N. Tatarnic and S. Lassau, 4♂ (AMNH_PBI 00012360–AMNH_PBI 00012363), 10♀ (AMNH_PBI 00012364–AMNH_PBI 00012373) (AM). Pilbara Region: Karijiji NP, Dales Gorge, Fortescue falls, 22.47694°S 118.54944°E, 07 Jun 2004, M. Bulbert, 1♂ (AMNH_PBI 00012359) (AM).

OTHER SPECIMENS EXAMINED: **AUSTRALIA: Australian Capital Territory:** Canberra, 35.2833°S 149.2167°E, 605 m, 1973, J.C.M. Carvalho, 1♀ (AMNH_PBI 00192745) (BMNH). **New South Wales:** Bogan River, J. Armstrong, 1♂ (AMNH_PBI 00192747), 1♀ (AMNH_PBI 00192746) (BMNH). Cowra, 33.819°S 148.658°E, 25 Mar 1960, M. I. Nikitin, Light Trap, 1♂ (AMNH_PBI 00192755), 1♀ (AMNH_PBI 00192744) (BMNH). Saltwater Reserve, 15 km SE of Taree, littoral rainforest, 31.915°S 152.451°E, 10 Dec 1991, G. Williams, *Euroschinus falcata* (Anacardiaceae), 1♀ (AMNH_PBI 00012435) (AM); 03 Dec 1991, G. Williams, *Euroschinus falcata* (Anacardiaceae), 1♂ (AMNH_PBI 00001236), 1♀ (AMNH_PBI 00001237) (AM); 26 Nov 1991, G. Williams, *Euroschinus falcata* (Anacardiaceae), 1♀ (AMNH_PBI 00001238) (AM). **Western Australia:** Peak Charles National Park Campground, 32.88335°S 121.1703°E, 300 m, 20 Nov 1999, R.T. Schuh, G. Cassis, and R. Silveira, *Melaleuca uncinata* R.Br. (Myrtaceae), det. Perth staff PERTH05670721, 10 juveniles (AMNH_PBI 00015533–AMNH_PBI 00015542) (AM).

Coridromius prolixipenis, new species
Figures 5, 6, 15M–P, map 8

HOLOTYPE: Male: **PAPUA NEW GUINEA: East New Britain:** Baining Mountains, Raunsepna, 4.433°S 151.783°E, 800–1000 m, 17 Nov 1979, W.C. Gagne (AMNH_PBI 00041550) *Homalanthus* sp. (Euphorbiaceae) (BPBM type# 16732) (BPBM).

DIAGNOSIS: Relatively large species distinguished by the following characters: unilobed proepisternum; dark brown coloration; impunctate pronotum; extremely long and thin left paramere. *C. prolixipenis* is similar to *hermosus* in structure and facial coloration, but the male genital capsule and left paramere are clearly distinct. The overall dark coloration resembles that of *nigrus* and *thalame*, but in *nigrus* the head and legs are all black, while *thalame* lacks the dark apical annulation on AII. Only *drepanopenis* has a left paramere as long and thin as *prolixipenis*, but the latter lacks pronotal punctation and is much darker in coloration.

DESCRIPTION: COLORATION (figs. 5, 6): Head: Mostly dark brown above frontoclypeal suture, yellow below; frons without vittae; ocular margins and posterior margin of vertex yellow, with faint brown mark medially; gena, maxillary and mandibular plates yellow; clypeus and buccula light brown; labrum brown; labium light yellow-brown, becoming darker apically. Antenna: AI dark brown; AII yellow-brown, with darker brown annulation; AIII and AIV dark brown. Thorax: Pronotal collar brown, becoming more orange posteriorly; pronotum dark brown, posterior margin faintly orange; thoracic pleura dark brown; mesoscutum and scutellum dark brown. Hemelytra: Dark brown. Legs: Procoxa yellow, forelegs missing from specimen; mesocoxa and trochanter dark brown, basal 2/3 of mesofemora yellow, apical third dark brown, tibia dark brown; metafemur dark brown, without diagonal stripes on outer margin; all tarsi yellow. Abdomen: Uniformly dark brown; left paramere yellow. SURFACE AND VESTITURE (figs. 5, 6): Head smooth, glossy and impunctate; pronotum, propleuron, metepimeron, scutellum, and hemelytra impunctate; head and dorsum sparsely clothed in short, white, decumbent setae, most setae knocked off holotype specimen. STRUCTURE (figs. 5, 6): Head: Wide; frons only weakly tumescent medially; posterior margin of head nearly flat. Thorax: Pronotum broad, weakly convex, anterior and anterolateral margins slightly upturned, submarginal region of humeral angles weakly excavate, posterior margin thinly carinate, weakly cleft medially; proepisternum uni-

lobed; posterior margin of metepimeron extended in the form of a long, triangular lobe; metanotum not prominent and flared. Hemelytra: Costal margin thin and flared over its entire length and weakly sinuate. Legs: Metatibial spines short and thin. Abdomen: When viewed laterally, posterior margin of abdominal sternite II not distinctly angular. MALE GENITALIA (fig. 15M–P): Right paramere triangular (fig. 15O–P); left paramere long, very thin, and curved, slightly twisted along its axis (fig. 15M), extending over the edge of the pygophore (fig. 15N); fold on left of pygophore forming a shallow groove (fig. 15N). FEMALE PARGENITALIA: Female unknown.

ETYMOLOGY: Derived from Latin *prolix* ("long") and *penis*, the name *prolixipenis* refers to the extremely long left paramere of the male.

HOST: Collected on an unidentified species of *Homalanthus* (Euphorbiaceae).

DISTRIBUTION: Found in the Baining Mountains, East New Britain, Papua New Guinea (map 8).

Coridromius pteraulos, new species
Figures 3, 5, 6, 16C–H, 17A–D, map 5

HOLOTYPE: Male: **PAPUA NEW GUINEA: Morobe:** Wau, 7.3333°S 146.71667°E, 1300 m, 25 Oct 1982–06 Nov 1982, W.C. Gagne (AMNH_PBI 00041517) (BPBM type# 16733) (BPBM).

DIAGNOSIS: Recognized by the following combination of characters: left posterior margins of abdominal sternites VII and VIII of male with a patch of dense, conelike setae; anterolateral margin of female hemelytra curled to form a semienclosed tube. This species is very similar to *declivipennis*, except that it possesses a thin, fingerlike ventral apical process on the pygophore (rather than the short and thick process of the latter; see fig. 11A), the hemelytra are less flared posteriorly, and the female possesses modified hemelytra. This hemelytral modification probably acts as a guide for the male's left paramere during copulation.

DESCRIPTION: COLORATION (figs. 5, 6): Mostly brown with orange and brown markings of variable intensity. Head: Yellow-brown to orange-brown; vittae on frons dark brown; depressions behind paired tumescences dark brown; ocular margins and posterior margin of head yellow; clypeus with one medial and two lateral brown stripes; gena, mandibular and maxillary plates yellow to pale orange-brown; buccula brown basally, becoming yellow; labrum brown; labium yellow, brown apically. Antenna: AI dark brown, apex yellow; AII light orange-brown with pale subapical annulation and broad brown apical annulation; AIII and AIV dark brown, yellow basally. Thorax: Pronotal collar yellow; pronotum mostly orange-brown with faint yellow medial stripe, yellow margins and faint yellowing at humeral angles; mesoscutum orange-brown; scutellum darker brown with faint yellow medial stripe, apex and basal corners; thoracic pleura orange to orange-brown, posterior margins yellowed. Hemelytra: Yellow-brown to brown, darker anteriorly, yellow to cream colored along claval commissure, lateral margins, and posteriorly; cuneus yellow-brown to brown; membrane brown with dark brown veins. Abdomen: Yellow-brown to orange-brown with a row of dark brown markings running from front to back, dorsolateral margins with alternate brown and cream markings; posterior margin of segment II dark brown. Legs: All coxae pale cream-colored; pro- and mesofemora cream-colored, brown apically; metafemur cream to yellow or orange-brown with 9 diagonal brown stripes on outer surface, sometimes dark brown immediately below striping; tibiae yellow, sometimes slightly brown. SURFACE AND VESTITURE (figs. 5, 6, 16E–F): Head with minor swelling on vertex finely punctate; pronotum, propleuron, and metepimeron finely punctate; scutellum, hemelytra, and cuneus irregularly punctate; clothed in long, white, decumbent setae; left posterior margins of abdominal sternites VII and VIII of male with a patch of dense, conelike setae (fig. 16E–F). STRUCTURE (figs. 3, 5, 6, 16C–H, 17A–D): Head: Frons roundly tumescent medially, merging with minor swelling on vertex; vertex with two minor swellings adjacent to eyes; posterior margin of head rounded, weakly carinate. Thorax: Pronotum broad and steep, posteriorly rounded, lateral margins carinate, anterolateral margins somewhat depressed, not

upturned, submarginal region of humeral angles excavate, callar region not developed; proepisternum bilobed (fig. 3C); posterior margin of metepimeron truncate (fig. 16G); metanotum prominent and flared (fig. 16C–D); scutellum somewhat flattened (fig. 16C–D). Hemelytra: Costal margin straight and carinate, females with anterior costal margin (both right and left sides) strongly carinate and recurved, forming a semicircular tunnel, open posteriorly (figs. 3C, 16H). Legs: Metatibial spines long and thick (fig. 3A). Abdomen: Posterolateral margin of abdominal sternite II sharply angular (figs. 3B, 16G). MALE GENITALIA (figs. 16E, 17A–D): Right paramere broad and rounded with thumblike lobe (fig. 17B–C), paramere appears U-shaped from above (fig. 17D); left paramere thick and elongate, sharply angled basally, then evenly curved and tapering to apex with a slight twist along its axis, curved at tip (fig. 17A); pygophore with a long mesal suture and long, thin, fingerlike ventral apical process (fig. 16E). FEMALE PARAGENITALIA: Abdominal tergite II swollen, posterolateral margins sulcate; right laterotergite II slightly desclerotized and swollen (fig. 16C–D).

ETYMOLOGY: The epithet *pteraulos* (Greek, "tube wing") refers to the modified hemelytra of the female.

REMARKS: Based on the modifications of hemelytra and the anterolateral margin of the abdomen of females, it is believed that the site of insemination in this species is dorsolateral.

HOST: Unknown.

DISTRIBUTION: Several specimens have been collected in Wau, Papua New Guinea, with a single specimen also collected in Sabah (map 5).

PARATYPES: **PAPUA NEW GUINEA: Morobe:** Wau, 7.3333°S 146.71667°E, 1200 m, 13 Dec 1976, W.C. Gagne, Light Trap, 2♂ (AMNH_PBI 00041523, AMNH_PBI 00041524) (BPBM); 02 Dec 1976, W.C. Gagne, Light Trap, 1♂ (AMNH_PBI 00041519), 1♀ (AMNH_PBI 00041520) (BPBM); 10 Dec 1976, W.C. Gagne, Light Trap, 2♀ (AMNH_PBI 00041521, AMNH_PBI 00041522) (BPBM); 15 Aug 1972, G.G.E. Scudder, Light Trap, 1♂ (AMNH_PBI 00041525) (BPBM); 13 Sep 1972, G.G.E. Scudder, Light Trap, 1♂ (AMNH_PBI 00041526) (BPBM); 12 Sep 1972, G.G.E. Scudder, Light Trap, 1♂ (AMNH_PBI 00041527) (BPBM); 08–14 Dec 1976, G.F. Hevel and R.E. Dietz IV, Light Trap, 1♂ (AMNH_PBI 00185367) (USNM). Wau, 7.3333°S 146.71667°E, 1300 m, 25 Oct 1982–06 Nov 1982, W.C. Gagne, 1♂ (AMNH_PBI 00041518) (BPBM).

OTHER SPECIMENS EXAMINED: **MALAYSIA: Sabah:** Tenompok, 6.01777°N 116.48555°E, 637 m, 10–19 Feb 1959, T.C. Maa, 1♂ (BPBM).

Coridromius punctatus Carvalho
Figures 5, 6, 17E–G, 18A–E, map 8

Coridromius punctatus Carvalho, 1987: 65–67 (n. sp.).

DIAGNOSIS: Distinguished by the following combination of characters: bilobed proepisternum; somewhat rounded lobe at apex of scutellum; mottled coloration; AI dark brown with pale base and apex; AII without dark brown postmedial band; right paramere with sharp, triangular spicule; left paramere scythelike with gutter open over its entire length. *C. punctatus* is very similar to *chinensis*, *confusus*, and *minusculus* (see diagnosis for *chinensis* above). The apex of the scutellum is less swollen than in *chinensis*, and *punctatus* is the only species with AI mostly dark brown and a short and thick ventral apical process on the pygophore.

REDESCRIPTION: COLORATION (figs. 5, 6): Mottled pale yellow, cream, light orange-brown and dark brown. Head: Mottled pale yellow with light orange-brown markings; faint light brown vittae sometimes present; depressions on vertex dark brown; mandibular plate and clypeus cream to yellow; clypeus with two irregular dark brown stripes, brown apically; maxillary plate orange-brown; buccula and gena cream to yellow; labrum orange-brown, labium light orange-brown, brown apically. Antenna: AI dark brown with yellow base and apex; AII light orange-brown, apically with faint cream annulation followed by dark brown annulation; AIII and AIV dark brown with yellow bases. Thorax: Pronotal collar yellow to light orange-brown; pronotum cream with mottled orange-brown punctures, darker around callar region, with two small dark brown

markings along anterior margin behind eyes; cream-colored medial line, often flanked with two irregular broad, dark brown patches; mesoscutum orange-brown; scutellum cream with mottled orange-brown punctures, apex cream, sometimes with pale midline. Hemelytra: Mostly orange-brown, sometimes with slightly darker brown patches; embolium sometimes with faint to more pronounced broad cream to yellow spots subbasally and anterior to costal fracture, sometimes with red tinge at costal fracture; endocorium with darker brown and cream patterning at apex of claval commissure; cuneus orange-brown, sometimes tinted red; membrane brown, with pale veins bounded by irregular darker brown markings. Legs: Mostly cream to yellow with brown markings; coxae cream; pro- and mesofemora with broad, subapical irregular brown markings; metafemur laterally with eight irregular diagonal brown stripes, ventrally with dark brown patch below stripes, depressions near apex orange-brown, bothria cream; pro- and mesotibiae pale with irregular dark brown markings; metatibia cream to yellow with irregular dark brown markings, sometimes fused; metatibial spines dark brown. Abdomen: Light orange-brown, sometimes with darker brown markings, posterior margin of sternite II dark brown. SURFACE AND VESTITURE (figs. 5, 6, 18A–C): Irregular depressions on head with deep punctures, somewhat coalescing (fig. 18B); pronotum and propleuron (fig. 18A) deeply, irregularly punctate; scutellum deeply, irregularly rugulopunctate, less so along midline; metepimeron (fig. 18C) and hemelytra impunctate; head and dorsum clothed in long white setae. STRUCTURE: (figs. 5, 6, 18A–C): Head (fig. 18A–B): Highly contoured; frons strongly tumescent, bounded by irregular depressions and three minor swellings laterally and posteriorly; foveae adjacent to eyes and near posterior margin of vertex deep; posterior margin of head medially rounded, not carinate; gena swollen; mandibular plate tumescent (fig. 18A). Thorax: Pronotum broad and somewhat elongate, posteriorly rounded, steeply declivent, deeply, irregularly punctate, anterolateral margins weakly carinate, submarginal region of humeral angles strongly excavate; posterior margin weakly cleft medially; callar region weakly developed; proepisternum bilobed (fig. 18A); propleuron deeply, irregularly punctate (fig. 18A); posterior margin of metepimeron either truncate (fig. 18C) or with a small rounded lobe; metanotum prominent and flared; scutellum dorsally flattened, apex a weakly rounded lobe. Hemelytra: Costal margin evenly rounded over its entire length, anterior portion not expanded. Legs: Metatibial spines long and thick. Abdomen: When viewed laterally, posterior margin of abdominal sternite II not distinctly angular. MALE GENITALIA (figs. 17E–G, 18D–E): Right paramere rounded with a long, sharp, triangular process (figs. 17F–G, 18D–E); left paramere scythe-shaped, slightly twisted along its axis, thick and laterally compressed at base, becoming thin apically, gutter open over entire length (figs. 17E, 18E); posterior margin of pygophore with long mesal suture, short fingerlike ventral apical process present (fig. 18D). FEMALE PARAGENITALIA: No visible external paragenitalia.

HOST: One specimen has been collected from *Rubus* sp. (Rosaceae).

DISTRIBUTION: Found in Papua New Guinea (map 8).

HOLOTYPE: **PAPUA NEW GUINEA: Morobe:** Mount Kaindi, 7.35°S 146.68333°E, 2300 m, 31 Dec 1964, J. Sedlacek, 1♀ (AMNH_PBI 00042153) (BPBM).

OTHER SPECIMENS EXAMINED: **PAPUA NEW GUINEA: East New Britain:** Baining Mountains, Raunsepna, 4.666°S 152°E, 800–1000 m, 17 Nov 1979, W.C. Gagne, 1♂ (AMNH_PBI 00041455) (BPBM). **Morobe:** Huon Peninsula: Finisterre Range, 5.8333°S 146.1166°E, 2550 m, 01–21 Oct 1958, W.W. Brandt, 1♂ (AMNH_PBI 00041462) (BPBM). Mount Kaindi, 7.35°S 146.6833°E, 2360 m, 03 Dec 1977, W.C. Gagne, Light Trap, 1♂ (AMNH_PBI 00041450), 3♀ (AMNH_PBI 00041451–AMNH_PBI 00041453) (BPBM); 05 Dec 1976, W.C. Gagne, *Rubus* sp. (Rosaceae), 1♀ (AMNH_PBI 00041456) (BPBM); 24 Feb 1979, W.C. Gagne, Light Trap, 1♀ (AMNH_PBI 00041461) (BPBM). Mount Kaindi, 7.35°S 146.68333°E, 2350 m, 14 Apr 1971, Tawi, 1♀ (AMNH_PBI 00041454) (BPBM); 23–28 Jul 1970, T. Tigner, 1♂ (AMNH_PBI 00041459) (BPBM); 27 Nov 1976, W.C. Gagne, 1♀ (AMNH_PBI 00041460) (BPBM).

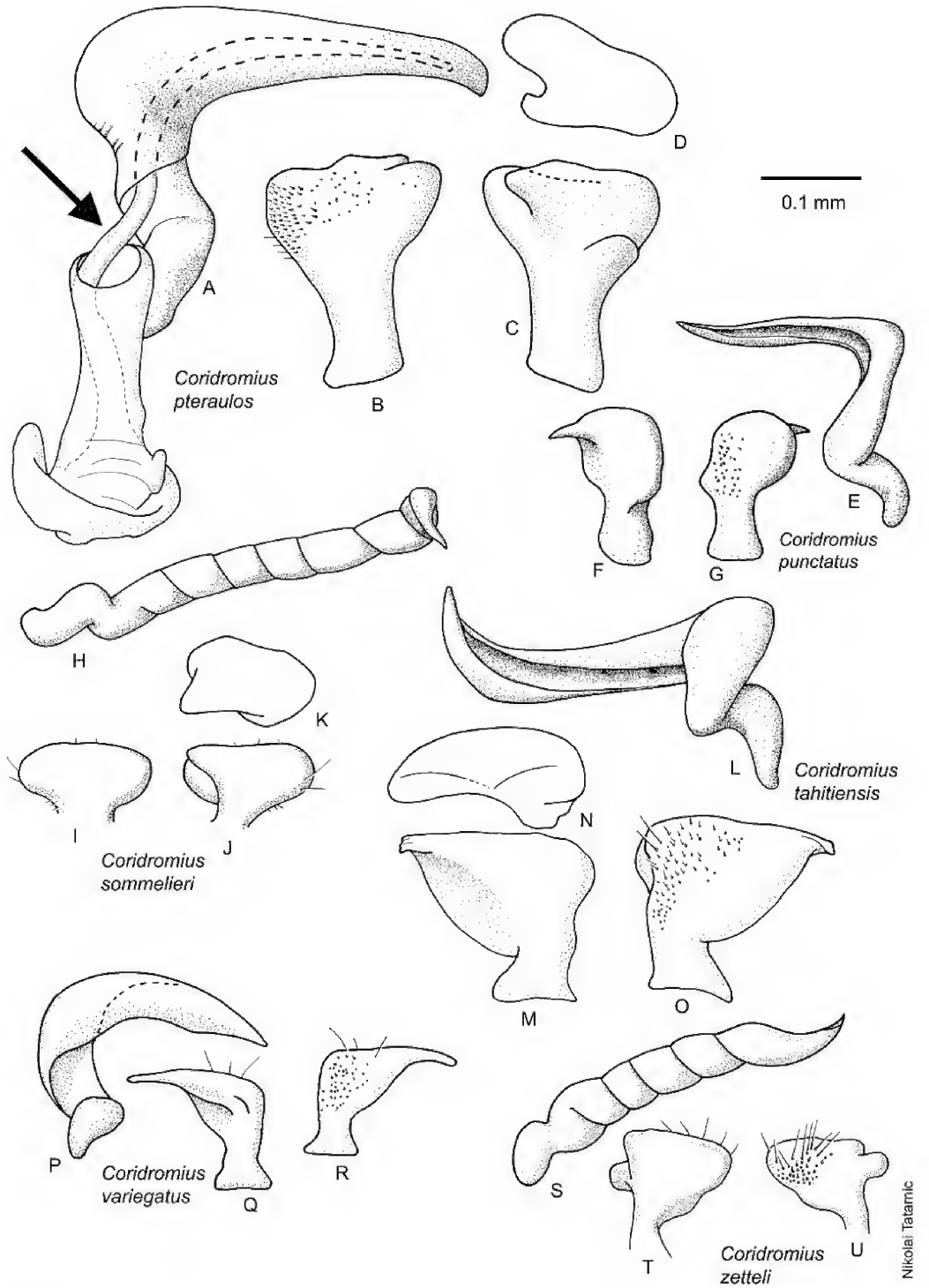


Fig. 17. Left and right parameres of *Coridromius* spp.: **A–D:** *C. pteraulos* (arrow indicates aedeagus). **E–G:** *C. punctatus*. **H–K:** *C. sommelieri*, **L–O:** *C. tahitiensis*. **P–R:** *C. variegatus*. **S–U:** *C. zetteli*.

Mount Kaindi, top, 7.35°S 146.68333°E, 24 Apr 1970, A.N. Gillogly & S. Keenan, Light Trap, 1♂ (AMNH_PBI 00041458), 1♀ (AMNH_PBI 00041457) (BPBM).

Coridromius ruwenzorii, new species
Figures 5, 6, 18F–H, map 2

HOLOTYPE: Female: **UGANDA:** Ruwenzori Range, Misigo, 0.24719°N 29.82239°E, 2606 m, 02–03 Jul 1952, D.S. Fletcher (AMNH_PBI 00178010) (BMNH).

DIAGNOSIS: Identified by the following combination of characters: smooth and rounded head; punctate hemelytra; brownish orange coloration with two large dark brown spots on scutellum; unique female paragenitalia. The male of *ruwenzorii* is unknown. Known only from a single female specimen, this species is nearly identical to *bulbopella*, however, the paragenitalia lack the well-developed cup-and-bulb structure of the latter, appearing instead as a much-reduced version thereof, with an additional desclerotized swelling of the first right dorsal laterotergite.

DESCRIPTION: COLORATION (figs. 5, 6) Head: Concolorous orange-brown; vertex without vittae; apex of clypeus slightly brown; maxillary plate brown. Antenna: Mostly yellow; AI with broad brown apical annulation; AII with brown apical annulation; AIII and AIV brown. Thorax: Pronotal collar yellow; pronotum orange-brown with very faint yellow medial stripe, posterior tinged orange; mesoscutum tinted orange; scutellum orange-brown with two large brown markings; thoracic pleura brownish yellow. Hemelytra: Mostly orange-brown, tinted orange at base; claval commissure faintly brown; membrane pale yellow-brown with darker brown veins. Abdomen: Yellow-brown, more orange along dorsal margin, with faint red markings laterally. Legs: Yellow-brown, paler basally, pro- and mesofemora with brown subapical band; metafemur with brown transverse stripes, apically tinted orange. SURFACE AND VESTITURE (figs. 5, 6, 18F–H): Head smooth with a few shallow punctures on vertex, vertex coarsely punctate; pronotum, scutellum (fig. 18F–G), and hemelytra with large, evenly spaced punctures; propleuron, metepimeron, and cuneus impunctate; clothed in short, white, decumbent setae. STRUCTURE (figs. 5, 6, 18F–H) Head: Frons with broad medial tumescence contiguous with raised lateral tubercles adjacent to eyes; posterior margin of head distinctly rounded. Thorax: Pronotum broad and evenly rounded, margins thinly carinate, anterolateral margins adjacent to callar region depressed, submarginal region of humeral angles weakly excavated, posterior margin weakly upturned, callar region weakly developed (fig. 18F); proepisternum bilobed; posterior margin of metepimeron broadly rounded (fig. 18H); metanotum prominent and flared; apex of scutellum not a swollen lobe. Hemelytra: Costal margin weakly flared posteriorly, carinate; cuneus small. Legs: Metatibial spines long and thick. Abdomen: Posterolateral margin of abdominal sternite II rounded, not sharply angular (fig. 18H). MALE GENITALIA: Unknown. FEMALE PARAGENITALIA (fig. 18F–G): Inner margins of right dorsal laterotergites II and III weakly lobate, laterotergite I swollen and desclerotized, posterior margin of right abdominal sternite II carinate and slightly flared, indicating probable sight of copulation.

ETYMOLOGY: Named for the Ruwenzori range in Uganda, from which the only specimen has been collected.

HOST: Unknown.

DISTRIBUTION: Found in Uganda (map 2).

Coridromius schuhi

Coridromius schuhi Linnavuori, 1994: 15–17 (n. sp.).

DISCUSSION: We have not seen any specimens of this species, as it appears that they have been lost. The original description and limited illustrations are not sufficient to distinguish this species from most others within the genus. Until such a time as the specimens are recovered, little can be said about the relationship of this species to others in the genus.

Coridromius sommelieri, new species
Figures 5, 6, 17H–K, 19A–F, 20B, map 5

HOLOTYPE: Female: **MALAYSIA: Sabah:** Tenompok, 6.01777°N 116.48555°E, 637 m,

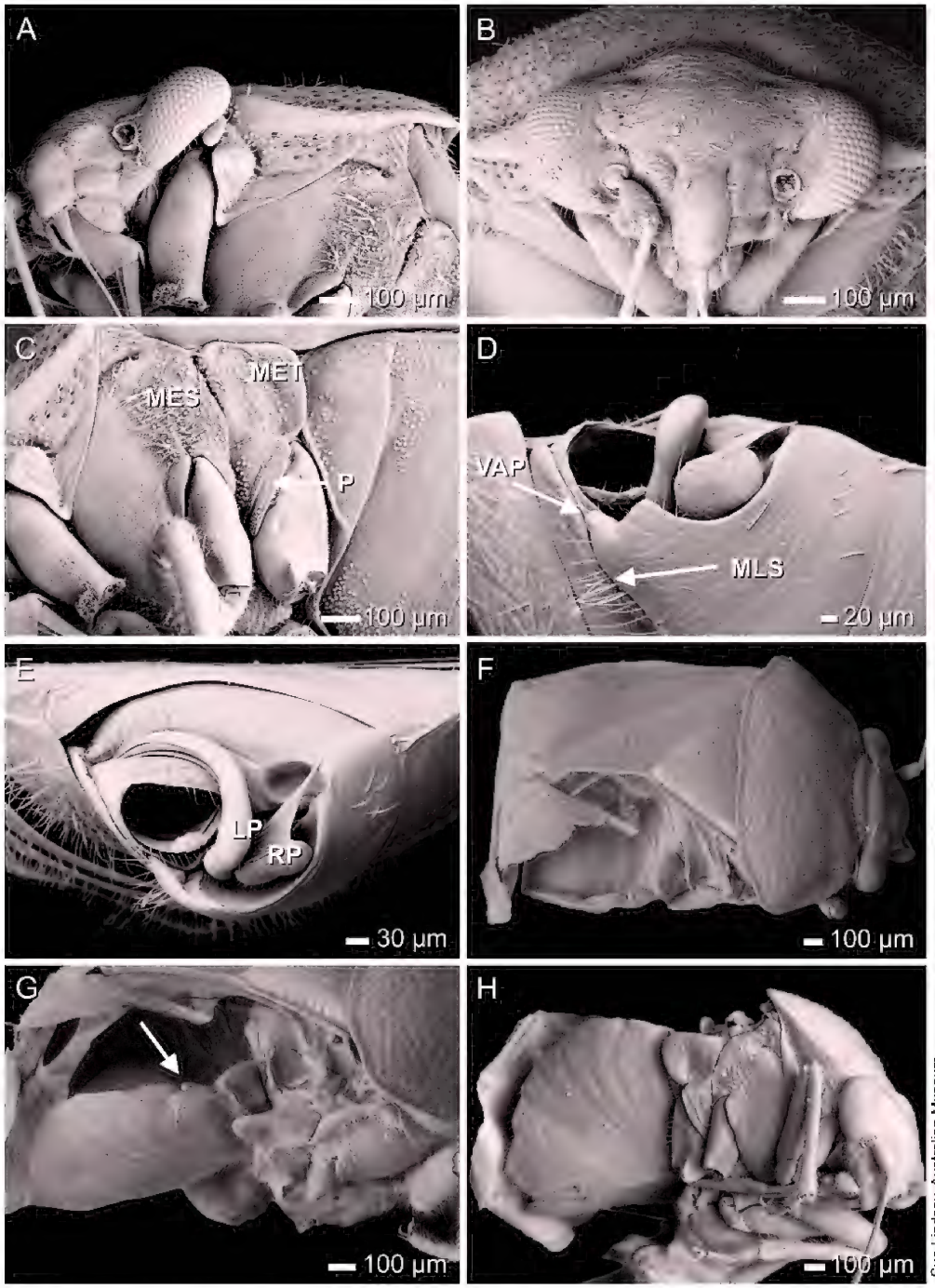


Fig. 18. Scanning electron micrographs: **A–E:** *C. punctatus*: **A.** Head and thorax, lateral view. **B.** Head, anterior view. **C.** Thorax and abdomen, lateral view. **D.** ♂ pygophore, posteroventral view. **E.** ♂ genitalia, posterior view. **F–H:** *C. ruwenzorii*: **F.** ♀ right wing and hemelytron removed, dorsal view. **G.** ♀ thorax and abdomen, arrow indicates female paragenital structure on laterotergites II and III, dorsolateral view. **H.** ♀ lateral view. LP = left paramere, MES = mesepimeron, MET = metepimeron P = peritreme, PES = proepisternum, RP = right paramere, VAP = ventral apical process.

15 Feb 1959, T.C. Maa (AMNH_PBI 00041567) (BPBM type# 16734) (BPBM).

DIAGNOSIS: This species is recognized by the following combination of characters: bilobed proepisternum; embolium with yellow U-shaped fascia near cuneal fracture; outer margin of embolium straight and carinate; male left paramere tightly corkscrewed with apex perpendicular to axis; female with corkscrewed paragenital opening on the right side of the abdomen in sternite II. This species is very similar to *zetteli*, but the ventral apical process on the pygophore is much more pronounced in *sommelieri* and the apex of the left paramere is perpendicular to its axis, rather than almost parallel as in *zetteli*. The female of *zetteli* is unknown.

DESCRIPTION: COLORATION (figs 5, 6): Yellow-brown with yellow and dark brown markings. Head: Light orange-brown; frons sometimes with pale brown vittae, faintly yellow along midline; ocular margins, raised lateral tubercles and posterior margin of head yellow; clypeus dark orange-brown, darkest at apex; maxillary plates tinted orange; labrum dark brown; labium light orange-brown, dark brown at apex. Antenna: AI dark brown; AII light yellow-brown with dark brown subapical band separated from dark brown apical annulation by narrow cream-colored band, base somewhat darkened; AIII and AIV dark brown, pale at base. Thorax: Pronotal collar yellow to brownish yellow; pronotum light orange-brown with two large dark brown markings reaching from anterior margin almost to posterior margin, midline pale, lateral and posterior margins yellow; mesoscutum orange-brown; scutellum light to dark brown with yellow midline, apex and sides; thoracic pleura mostly yellow-brown to orange-brown with posterior margins of each sclerite yellowed; mesopleuron dark brown ventrally. Hemelytra: Predominantly light orange-brown, with darker brown markings on corium and embolium above cuneal fracture; costal margins yellow; U-shaped fascia on lateroapical margin of embolium yellow to orange; cuneus dark brown; membrane light brown with dark brown veins. Legs: Pro- and mesofemora and tibiae light yellow-brown, sometimes tinted orange; metafemur yellowed basally, with 8 or 9 diagonal brown stripes merging with dark brown patch below, apex brown; metatibia orange-brown to dark brown. Abdomen: Orange-brown with alternating cream and dark brown markings along dorsolateral margin. SURFACE AND VESTITURE (figs. 5, 6, 19A–B): Head, pronotum, propleuron, metepimeron (fig. 19A–B), scutellum, and hemelytra finely shallowly punctate; head and dorsum clothed in long, silvery, decumbent setae. STRUCTURE (figs. 5, 6, 19A–B): Head: Frons broadly tumescent medially; lateral tubercles adjacent to eyes small, bordered posteriorly by shallow foveae; posterior margin of head carinate and medially rounded. Thorax: Pronotum broad, margins slightly carinate, anterolateral margins slightly turned upward, submarginal region of humeral angles excavated, callar region undifferentiated; proepisternum bilobed; posterior margin of metepimeron truncate (fig. 19A–B); metanotum prominent and flared; scutellum flattened. Hemelytra: Costal margin straight and carinate; embolium with U-shaped fascia on lateroapical angle. Legs: Metatibial spines long and thick. Abdomen: Posterolateral margin of abdominal sternite II angular (fig. 19A). MALE GENITALIA (figs. 17H–K, 19D–F): Right paramere broad and rounded with thumblike lobe, appearing U-shaped when viewed dorsally (figs. 17I–K, 19E); left paramere straight and tightly coiled along its axis, apex thin and angled perpendicular to axis (figs. 17H, 19E–F); posterior margin or pygophore with broad, triangular ventral apical process and long mesal suture (fig. 19D). FEMALE PARAGENITALIA (figs. 19B–C, 20B): On right side of body, corkscrewed copulatory canal located intrasegmentally in sternite II (figs. 19B–C, 20B).

ETYMOLOGY: The name *sommelieri* refers to the shape of the male left paramere, reminiscent of a sommelier's corkscrew.

REMARKS: *C. sommelieri* is one of the most unusual species of *Coridromius* due to the corkscrewed male left paramere and reciprocal corkscrewed paragenital opening on the female. When dissected, this female copulatory tube is shown to be thinly sclerotized, at the apex of which one finds the puncture wound caused by the male genitalia (fig. 20B). Specimens of *sommelieri*

were initially thought to belong to *zetteli* (e.g., Tatarnic et al., 2006), but closer examination of the male genitalia has revealed that they are in fact separate species. This species also appears similar to *testaceous*, except females of the latter lack any visible external paragenitalia. The male of *testaceous* is unknown.

HOST: Unknown.

DISTRIBUTION: Collected from Tenompok, Sabah (map 5).

PARATYPES: **MALAYSIA: Sabah:** Tenompok, 6.01777°N 116.48555°E, 637 m, 10–19 Feb 1959, T. C. Maa, 1♂ (AMNH_PBI 00041571), 1♀ (AMNH_PBI 00041570) (BPBM); 13 Feb 1959, T.C. Maa, 1♀ (AMNH_PBI 00041572) (BPBM); 15 Feb 1959, T.C. Maa, 2♀ (AMNH_PBI 00041568, AMNH_PBI 00041569) (BPBM).

Coridromius tahitiensis, new species
Figures 5, 6, 17L–O, 19G–H, 20C, map 1

HOLOTYPE: Male: **FRENCH POLYNESIA: Society Islands:** Tahiti Island: road to Mt. Marau, 17.61666°S 149.39472°W, 840–850 m, 29 Aug 1977, W.C. Gagne and S.L. Montgomery, Light Trap (AMNH_PBI 00041530) (BPBM type# 16735) (BPBM).

DIAGNOSIS: This species can be recognized by the following characters: distinct dark brown Y-shaped pattern along inner margins of hemelytra; metafemoral stripes faint or absent; females with a large paragenital opening on the right side of the abdomen between sternites II and III.

DESCRIPTION: COLORATION (figs. 5, 6): Head: Without vittae; pale yellow-brown to brown; labium pale, brown apically. Antenna: AI dark brown; AII pale yellow-brown with dark brown apical annulation; AIII and AIV uniformly dark brown. Thorax: Pronotal collar uniformly yellow; pronotum pale yellowish brown to brown, with a pale medial stripe, darker specimens with a pair of small, dark brown maculations anteriorly, occasionally with broad dark brown rectilinear maculations posteriorly, margins with distinct yellow piping; mesoscutum anteriorly black, caudally brown; scutellum yellow in males, brown with darker brown and yellow markings in females; thoracic pleura mostly brown with margins of each sclerite yellowed. Hemelytra: Pale yellowish brown to darker brown with distinct dark brown "Y" along inner margins, sometimes with dark brown markings on corium and posterior margin of embolium; cuneus yellow-brown; membrane yellow-brown, veins darker brown anteriorly. Abdomen: Pale yellow, sometimes with brown, orange or red markings; females often with broad, brown markings anterolaterally. Legs: Pro- and mesofemora uniformly pale yellow; metafemur either pale yellow with brown apex (most males) or pale yellow to brown with 7 diagonal brown bands coalescing ventrally into a large brown patch, becoming reddened posterior to striping (females), brown at apex. SURFACE AND VESTITURE (figs. 5, 6, 19G): Head shallowly punctate; pronotum finely punctate; propleuron, metepimeron (fig. 19G), scutellum and hemelytra impunctate; head and dorsum sparsely clothed in short, pale, decumbent setae. STRUCTURE (figs. 5, 6, 19G): Head: Frons weakly tumescent medially; vertex with slightly raised tubercles adjacent to eyes, bordered posteriorly by shallow depressions; posterior margin of head carinate and almost flat. Thorax: Pronotum weakly rounded, finely punctate, broad, anterolateral margins weakly upturned and carinate, submarginal region of humeral angles weakly excavate, posterior margin weakly upturned; proepisternum unilobed; posterior margin of metepimeron truncate (fig. 19G); metanotum not prominently flared. Hemelytra: Costal margin flared over its entire length and weakly sinuate, more so in males. Legs: Metafemur only weakly incrassate; metatibial spines short and thin. Abdomen: In lateral view posterior margin of abdominal sternite II not distinctly angular. MALE GENITALIA (figs. 17L–O, 19H): Right paramere triangular (fig. 17M–O); left paramere thick and scythe-shaped (figs. 17L, 19H); pygophore with a deep, rounded groove on left side of ventral margin, no mesal suture (fig. 19H). FEMALE PARAGENITALIA (fig. 19G, 20C): Right posterolateral margin of abdominal segment II flared outward, distinct paragenital opening between segments II and III (fig. 19G) opening into a thinly sclerotized chamber within the abdominal cavity (fig. 20C).

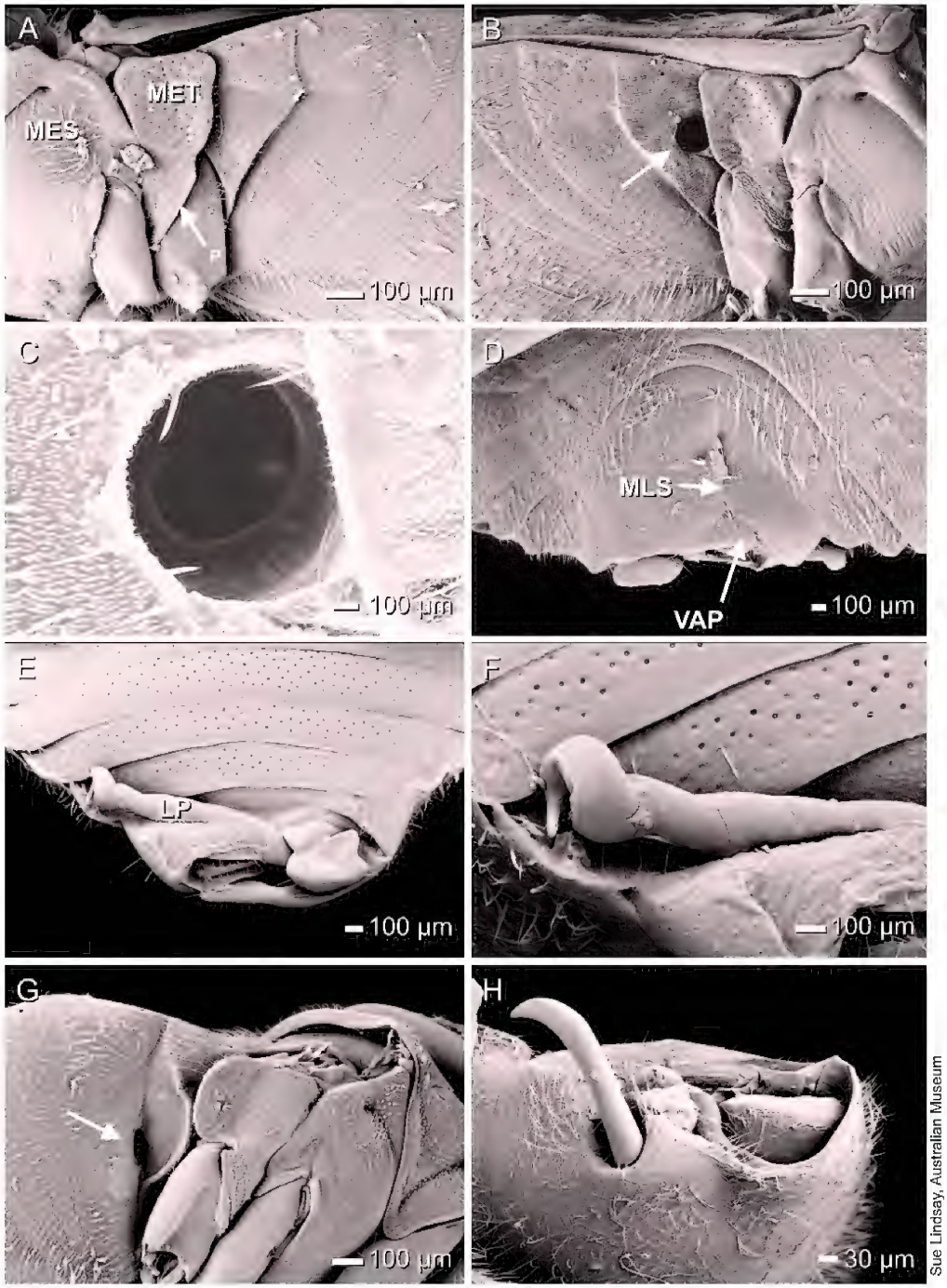


Fig. 19. Scanning electron micrographs: **A–F:** *C. sommelieri*: **A.** ♀ thorax and abdomen, left lateral view. **B.** ♀ thorax and abdomen, arrow indicates paragenital opening, right lateral view. **C.** ♀ detail of paragenital opening. **D.** ♂ pygophore, ventral view. **E.** ♂ genitalia, dorsal view. **F.** ♂ detail of left paramere. **G–H:** *C. tahitiensis*: **G.** ♀ thorax and abdomen, arrow indicates paragenital opening, right lateral view. **H.** ♂ genitalia, posterior view. LP = left paramere, MES = mesepimeron, MET = metepimeron, MLS = mesal suture, P = peritreme, RP = right paramere, VAP = ventral apical process.

ETYMOLOGY: Named after Tahiti Island, where the holotype was collected.

REMARKS: This is the only known oceanic species with prominent external paragenitalia. It is also one of the few species we have seen with clear sexually dimorphic coloration.

HOST: Unknown.

DISTRIBUTION: Found in French Polynesia (map 1).

PARATYPES: **FRENCH POLYNESIA: Society Islands:** Moorea Island: Mt. Tohiea base: Belvedere Trail, 17.556°S 149.826°W, 400 m, 18–19 Sep 1988, S.L. Montgomery, 1♀ (AMNH_PBI 00041545) (BPBM). Tahiti Island: Fare Rau Ape Aorai, 17.61916°S 149.49027°W, 600–1400 m, 09 Mar 1977, N.L.H. Krauss, 1♂ (AMNH_PBI 00041536) (BPBM). Fare Vaiufaufa, 17.7825°S 149.25166°W, 850 m, 03 Jul 1977, W.C. Gagne, Light Trap, 3♂ (AMNH_PBI 00041533–AMNH_PBI 00041535), 3♀ (AMNH_PBI 00041539–AMNH_PBI 00041541) (BPBM). Mt. Marau, 17.61805°S 149.38333°E, 1400–1500 m, 18–21 Aug 1977, W.C. Gagne and S.L. Montgomery, Light Trap, 2♀ (AMNH_PBI 00041531, AMNH_PBI 00041532) (BPBM); 14 Sep 1988, S.L. Montgomery and B.H. Gagne, 2♂ (AMNH_PBI 00041537–AMNH_PBI 00041538), 3♀ (AMNH_PBI 00041542–AMNH_PBI 00041544) (BPBM). Mt. Marau, summit road, fern banks nr. km 7, 17.61888°S 149.55444°E, 1125 m, 04 Sep 2006, D. A. Polhemus, 1♀ (AMNH_PBI 00042604) (BPBM). Papenoo Valley, 17.51°S 149.42°W, 250 m, 17–18 Sep 1988, S.L. Montgomery, Light Trap, 1♀ (AMNH_PBI 00041546) (BPBM). Tahiti Nui, Mt. Marau, gulch off road to summit, 17.6°S 149.56416°E, 885 m, 10 Sep 2006, C. Ewing, *Coprosoma* sp. (Rubiaceae), 1♂ (AMNH_PBI 00042603) (BPBM).

Coridromius testaceous Liu and Zhao
Figures 2D, 5, 6, map 5

Coridromius testaceous Liu and Zhao, 1999: 55–58.

DIAGNOSIS: This species is recognized by the following combination of characters: bilobed proepisternum; embolium with yellow U-shaped fascia near cuneal fracture, lateral margins of hemelytra straight and carinate; female without prominent paragenital opening on right side of abdomen. Male unknown. *C. testaceous* is very similar in appearance to *sommelieri* and *zetteli*; however, it lacks the distinct paragenitalia of the former, which we suspect may also be present in the latter.

REDESCRIPTION: COLORATION (figs. 2D, 5, 6): Varying from light brown to almost uniform dark brown with yellow markings. Head: Light brownish yellow to orange-brown; frons typically yellow along midline, with very faint to distinct dark brown vittae; clypeus yellowed with darker brown markings at base, dark brown apically; mandibular plates yellowed; maxillary plates brownish orange; buccula yellowed; labrum dark brown basally, labium pale, brown apically. Antenna: AI dark brown, pale at base and apex; AII light orange-brown with dark brown subapical band, separated from dark brown apical annulation by narrow cream band; AIII and AIV dark brown, pale at base. Thorax: Pronotal collar yellow to orange-brown, darker anteriorly; pronotum light orange-brown to dark brown, with median yellow band (faint in some specimens), yellowed at humeral angles in paler specimens, lateral and posterior margins yellow; mesoscutum orange-brown to dark brown; scutellum light orange-brown to dark brown with yellow midline, apex and sides; thoracic pleura mostly orange-brown with posterior margins of each sclerite yellowed; mesopleuron dark brown ventrally. Hemelytra: Orange-brown to nearly uniform dark brown; in paler specimens clavus slightly paler at claval commissure and along posterior margin, immediately above cuneal fracture; embolium yellow along outer margin, with U-shaped yellow fascia at lateroapical margin; cuneus dark brown; membrane pale brown with dark brown veins. Legs: Pro- and mesofemora yellow at base, becoming orange-brown toward apex; metafemur pale basally, with 8 or 9 diagonal dark brown stripes, stripes merging with dark brown ventral patch in darker specimens, subapical lateral depressions dark brown. Abdomen: Orange-brown with alternating cream and dark brown markings along dorsolateral margin. SURFACE AND VESTITURE (figs. 2D, 5, 6): Head, pronotum, propleuron, metepimeron, scutellum, and hemelytra finely, shallowly punctate; head and dorsum clothed in long, silvery, decumbent setae.

STRUCTURE (figs. 2D, 5, 6): Head: Frons broadly medially tumescent and laterally depressed; lateral tubercles adjacent to eyes small, bordered posteriorly by shallow depressions; posterior margin of head carinate and medially rounded. Thorax: Pronotum broad, lateral and posterior margins slightly carinate, anterolateral margins slightly upturned, submarginal region of humeral angles excavated, callar region undifferentiated; proepisternum bilobed; posterior margin of metepimeron truncate; metanotum prominent and flared; scutellum flattened. Hemelytra: Costal margin straight and carinate; embolium with U-shaped fascia on lateroapical angle. Legs: Metatibial spines long and thick. Abdomen: Posterolateral margin of abdominal sternite II angular and transversely creased. MALE GENITALIA: Unknown. FEMALE PARAGENITALIA: Without distinct external paragenitalia.

REMARKS: *C. testaceous* is known only from female specimens. Superficially it appears identical to *zetteli*, which is known only from male specimens and has an overlapping distribution. Furthermore, both species have even been collected together, along with *chinensis*, on a single unidentified *Macaranga* tree in southern China. We refrain from synonymizing the two species without further data, however, as we suspect the female of *zetteli* should have matching corkscrewed paragenitalia to accommodate the unusual male intromittent organ (as we see in *sommelieri*), whereas female *testaceous* have no visible external paragenitalia whatsoever. Interestingly, some of the females collected alongside male *zetteli* show damage in the form of irregular depressions on right abdominal sternite II, perhaps from copulation attempts by male *zetteli*.

HOST: Recorded from the flowers of *Macaranga* sp. (Euphorbiaceae) in southern China.

DISTRIBUTION: Ranging from central China south through mainland Southeast Asia, west to Nepal (map 5).

HOLOTYPE: Female: **CHINA: Hainan Prov.:** Jianfengling, 18.7°N 108.8°E, 01 Apr 1985, Le-Yi Zheng, Light Trap (AMNH_PBI 00178049) (NKMU).

OTHER SPECIMENS EXAMINED: **CHINA: Yunnan Prov.:** Xishuangbanna Tropical Rainforest Ecosystem Station, ~3 km from entrance, 21.96777°N 101.2075°E, 650 m, 30 May 2006, N. Tatarnic, *Macaranga* sp. (Euphorbiaceae), 3♀ (AMNH_PBI 00006070–AMNH_PBI 00006072) (AMNH). Xishuangbanna Tropical Botanical Garden, gallery forest by river, 21.93333°N 101.24444°E, 553 m, 26 May 2006–28 May 2006, N. Tatarnic, *Macaranga* sp. (Euphorbiaceae), 2♀ (AMNH_PBI 00006068, AMNH_PBI 00006069) (AMNH). **INDONE-**

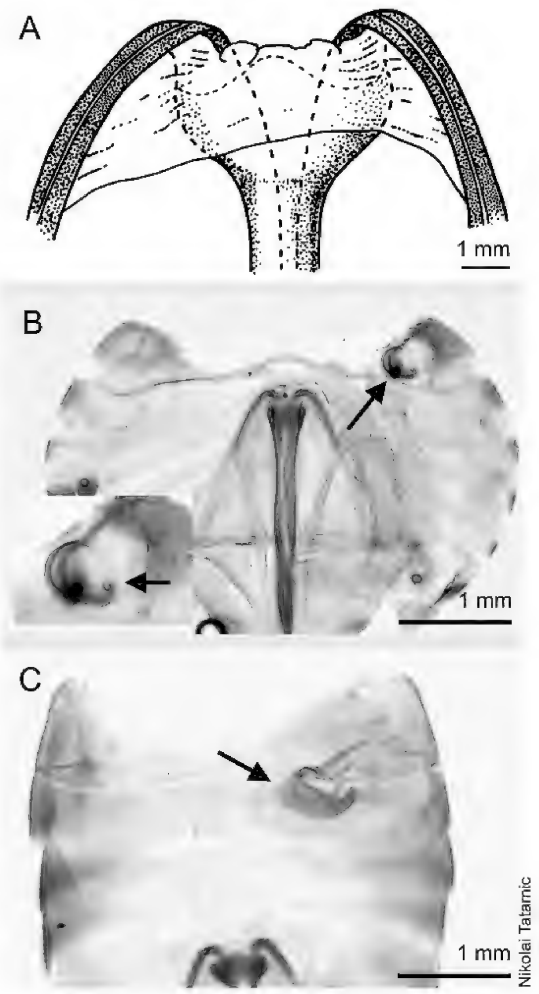


Fig. 20. Female genitalia. **A.** Illustration of ♀ *C. variegatus*, showing complete desclerotization of posterior wall. **B.** Dissection of *C. sommelieri* ♀, showing invagination of corkscrewed paragenital opening (arrow). Inset: Detail showing puncture at apex of paragenital opening (arrow). **C.** Dissection of *C. tahitiensis* ♀. Arrow indicates lightly sclerotized invagination of copulatory opening.

SIA: North Sumatra: Medan, 3.5833°N 98.6667°E, 29 Apr 1922, L. Fulmek, Light Trap, 1 undetermined (AMNH_PBI 00189970) (NHMW). **LAO PEOPLE'S DEMOCRATIC REPUBLIC: Vientiane Prov.:** Ban Van Eue, 17.96666°N 102.6°E, 800 m, 16 Apr 1965, J.L. Gressitt, (Cyperaceae), 2♀ (AMNH_PBI 00042148, AMNH_PBI 00042149) (BPBM). **NEPAL:** Royal Chitwan National Park, Machan Resort, 27.58305°N 84.5°E, 07–09 Sep 2005, T. Yasunaga, M. Takai and T. Shishido, 2♀ (AMNH_PBI 00189998) (TYCN). **VIETNAM:** Tam Dao NP, 21.4536°N 105.6436°E, 900 m, 17–18 Jun 1999, Y. Nakatani, 1♀ (AMNH_PBI 00190012) (TYCN).

Coridromius thalame, new species
Figures 5, 6, 21A, map 5

HOLOTYPE: Female: **MALAYSIA: Sabah:** Ranau, 5.9667°N 116.6833°E, 1176 m, 22–25 Feb 1959, T.C. Maa (AMNH_PBI 00041547) (BPBM type# 16736) (BPBM).

DIAGNOSIS: Recognized by the following combination of characters: large size; dark brown coloration with yellow and orange head, venter, and legs; relatively short metatibial spines; unique external paragenitalia. The paragenitalia of *thalame* is similar to that of *ephippius*, except the upper posterior margin of right abdominal sternite II is much less tuberculate. The male of *thalame* is unknown.

DESCRIPTION: COLORATION (figs. 5, 6): Head: Mostly orange; lateral tubercles adjacent to eyes yellowed, foveae behind tubercles brown; ocular margins and posterior margin of vertex with yellow piping; frons with very weak brown vittae. Antenna: AI orange, brown apically; AII orange-brown with darker brown apical annulation; AIII and AIV missing from specimen. Thorax: Pronotal collar yellow; pronotum dark reddish brown with faint, lighter brown midline; margins yellow-brown; mesoscutum dark reddish brown; scutellum dark reddish brown, yellowed on anterior corners and on either side of apex; proepisternal lobe yellow, other thoracic pleura dark brown dorsally, yellow ventrally, posterior margins somewhat lighter. Hemelytra: Uniform amber brown; membrane brown with dark brown veins. Abdomen: Amber brown, becoming slightly paler ventrally and at apex. Legs: Coxae yellow; pro- and midlegs yellow-orange; posterior femur yellow basally, brown ventrally and subapically, with diagonal brown stripes on outer surface, apex yellow-orange; hind tibia yellow-orange. SURFACE AND VESTITURE (figs. 5, 6): Head glossy and punctate; pronotum glossy with shallow, widely spaced punctures; propleuron, metepimeron and hemelytra impunctate; scutellum with a few shallow punctures; sparsely clothed in short, white, simple decumbent setae. STRUCTURE (figs. 5, 6, 21A): Head: Wide; frons weakly medially convex; small raised tubercles adjacent to eyes, bordered posteriorly by shallow depressions; posterior margin of vertex only weakly medially rounded, mostly flat, not carinate. Thorax: Pronotum broad; anterolateral margins slightly upturned; callar region undifferentiated; proepisternum unilobed; posterior margin of metepimeron truncate (fig. 21A); metanotum not prominently flared. Hemelytra: Lateral margin of hemelytron flared posteriorly. Legs: Metatibial spines short and thin. Abdomen: Posterior margin of abdominal sternite II not sharply angled. MALE GENITALIA: Unknown. FEMALE PARAGENITALIA: On right side of abdomen, laterotergites II and III twisted and swollen, posterior margin of sternite II flared to expose distinct paragenital opening between segments II and III (fig. 21A).

ETYMOLOGY: The epithet *thalame* (from Greek, for "cave" or "den") reflects the unusual paragenital opening of this species.

REMARKS: *C. thalame* is one of six species collected by T. C. Maa in February 1959 in Sabah. As with several other species, *thalame* is known from only a single specimen.

HOST: Unknown.

DISTRIBUTION: Collected in Ranau, Sabah (map 5).

Coridromius variegatus (Montrouzier, 1861)
Figures 5, 6, 17P–R, 21B–C, map 1

Ocypus variegatus Montrouzier, 1861: 67, (n. sp.).
Leptomerocoris variegatus: Walker, 1873: 145 (new combination).
Coridromius variegatus: Poppius, 1911: 15; (Van Duzee), 1932: 180; (Woodward), 1954: 231; (Carvalho), 1955: 68; (Carvalho), 1987: 67–69.

DIAGNOSIS: Recognized by the following combination of characters: proepisternum unilobed; metanotum not prominently flared; upper posterior margin of metepimeron with small, rounded lobe; posterior margin of pygophore with fold on left side forming a shallow U-shaped groove, without small apophysis on right margin of groove; left paramere short and thick; right paramere triangular and apically elongate. *C. variegatus* is most similar to *bicolor*, *chenopoderis*, *monotocopsis*, and *pilbarensis*, but can be distinguished from these by minor variations in coloration and male genitalia.

REDESCRIPTION: COLORATION (figs. 5, 6): Mostly yellow- to orange-brown, varying in intensity. Head: Yellowish brown; with dark brown vittae; lateral margins bordering eyes and posterior margin of vertex yellow; lateral tubercles yellow, depressions brown to black; vertex with median brown to black marking; mandibular and maxillary plates yellow-brown; buccula darker brown; clypeus with irregular median and lateral red-brown markings; labrum reddish brown; labium pale brown, dark brown at apex. Antenna: AI pale, sometimes with faint subapical brown band; AII without submedial band, apex with dark brown annulation; AIII and AIV dark brown. Thorax: Pronotal collar yellow to orange-brown, anterior margin dark brown; pronotum mostly orange-brown with faint yellow medial stripe, callar region with irregular dark brown spots coalescing, margins of pronotum with yellow piping; mesoscutum orange-brown; scutellum orange-brown, with paired lateral dark brown markings, corners fading to pale yellow, sometimes with a median dark brown stripe; thoracic pleura mostly dark brown with posterior margins of each sclerite yellowed. Hemelytra: Varying from light yellow-brown to dark brown, paler apically; claval commissure dark brown; endocorium with dark brown arched band coalescing with claval commissure and dark brown spot below; embolium sometimes tinted red or orange at cuneal fracture; cuneus generally yellow-brown, sometimes tinted red or orange; membrane brown with dark brown veins. Legs: Pro- and mesofemora pale yellow-brown; metafemur, pale basally, with 8 or 9 diagonal dark brown stripes on lateral surface, ventrally brown, somewhat chestnut laterally behind stripes, bothria not readily visible; pro- and mesotibiae pale; hind tibia brown; tarsi brown at apex. Abdomen: Yellow- to orange-brown, often dark brown anteriorly, dorsolateral half of sternites 7–8 yellow in some individuals. SURFACE AND VESTITURE (figs. 5, 6): Head and pronotum with shallow punctures; propleuron, metepimeron, scutellum, and hemelytra impunctate; head and dorsum sparsely covered in short, pale, decumbent setae. STRUCTURE (figs. 5, 6): Head: Frons broadly tumescent medially; vertex with two slightly raised tubercles adjacent to eyes, bordered posteriorly by shallow depressions; posterior margin of head somewhat carinate, slightly rounded medially but otherwise flat. Thorax: Pronotum broad, margins carinate, anterolateral margins only weakly upturned, submarginal region of humeral angles weakly excavate; proepisternum unilobed; posterior margin of metepimeron truncate with distinct rounded lobe projecting rearward from upper corner (as in *marmoreus*: fig. 14B); metanotum not prominent and flared. Hemelytra: Lateral margin of hemelytron thin and slightly flared over its entire length. Legs: Metatibial spines long and thick. Abdomen: When viewed laterally, posterior margin of abdominal sternite II not distinctly angular. MALE GENITALIA (figs. 17P–R, 21B–C): Right paramere small, triangular, and apically elongate (fig. 17Q–R); left paramere short and scythe-shaped, apex broadly acute (figs. 17P, 21B–C); pygophore biconvex with shallow fold on left ventral margin (fig. 21B–C). FEMALE PARAGENITALIA: No visible paragenitalia, but right laterotergite II with small melanized scars in some individuals, indicating probable site of copulation.

REMARKS: This is the type species of *Coridromius*. Contrary to Carvalho's redescription (Carvalho, 1987: 67–69), there is no spinelike projection on the pygophore. It is most likely that what has been misinterpreted as a process on the pygophore is in fact the apex of the right paramere.

Up until now most *Coridromius* specimens from the Pacific and Australia have been thought to belong to *variegatus*. Instead, what we have thought of as *variegatus* is in effect four distinct species. Described from

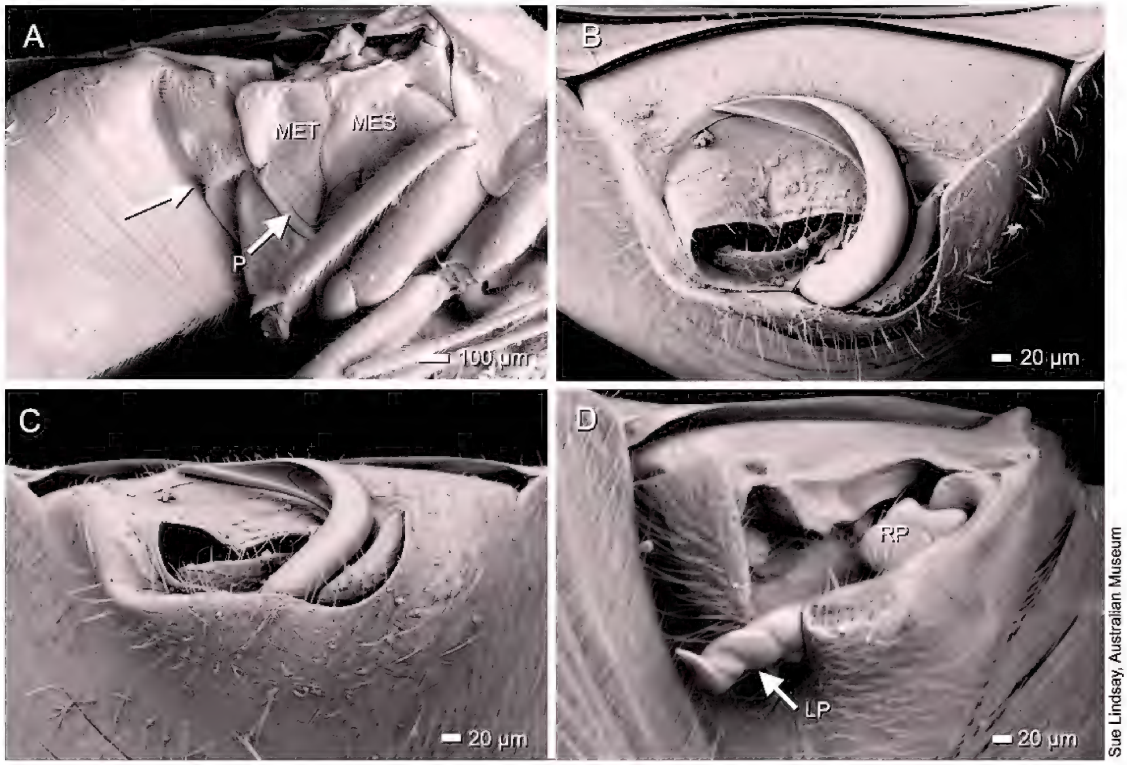


Fig. 21. Scanning electron micrographs: **A.** *C. thalame*: ♀ thorax and abdomen, arrow indicates paragenital opening, right lateral view. **B–C:** *C. variegatus*: **B.** ♂ genitalia, dorsal view. **C.** ♂ genitalia, posterior view. **D.** *C. zetteli*: ♂ genitalia, posterior view. LP = left paramere, MES = mesepimeron, MET = metepimeron, P = peritreme, RP = right paramere.

New Caledonia, *variegatus* is also found in Fiji, and perhaps other nearby islands. In Australia and New Zealand, however, what we find is not *variegatus* but three other species: *chenopoderis*, *monotocopsis*, and *pilbarensis* (see descriptions above). Superficially all four species are strikingly similar, yet closer examination yields several distinguishing, if subtle, features. *C. variegatus* can readily be distinguished from the others by the small but distinct rounded lobe on the upper posterior margin of the metepimeron (as in *marmoreus*; fig. 14B), and males of *variegatus* by the relatively longer apex of the right paramere.

HOST: Specimens have been collected from unidentified species of *Phyllanthus* and *Macaranga* (Euphorbiaceae) (table 2).

DISTRIBUTION: *C. variegatus* is known from New Caledonia and Fiji (map 1).

HOLOTYPE: **NEW CALEDONIA: Province des Iles Loyauté:** Lifou Island, 20.88333°S 167.2167°E, 1861, P.A. Montrouzier, 1♀ (AMNH_PBI 00018973) (NHMW).

OTHER SPECIMENS EXAMINED: **FIJI: Western Division:** Nadarivatu, Viti Levu Island, 17.566°S 177.966°E, 823 m, 10 Nov 1964, N. McFarland, 1♂ (AMNH_PBI 00038586) (SAMA). **NEW CALEDONIA: Province Nord:** Ciu, 21.53333°S 165.95°E, 09 Jan 1969, N. L. H. Krauss, 1♀ (AMNH_PBI 00042158) (BPBM). Hienghene, 20.68333°S 164.93333°E, 100 m, Jan 1971, N. L. H. Krauss, 5♂ (AMNH_PBI 00042186–AMNH_PBI 00042190), 4♀ (AMNH_PBI 00042169–AMNH_PBI 00042172) (BPBM). Poindimié, 20.93333°S 165.33333°E, 50 m, Jan 1969, N. L. H. Krauss, 2♂ (AMNH_PBI 00042206, AMNH_PBI 00042207), 1♀ (AMNH_PBI 00042211) (AM). 15♂ (AMNH_PBI 00042191–AMNH_PBI 00042205), 3♀ (AMNH_PBI 00042208–AMNH_PBI 00042210) (BPBM). Vallée d'Amoa, 20.95°S 165.28333°E, 07 Feb 1963, N. L. H. Krauss, 1♀ (AMNH_PBI 00042165) (BPBM). **Province Sud:**

Anse Vata, 22.31666°S 166.43305°E, 21 Mar 1961, J. Sedlacek, 1♀ (AMNH_PBI 00042157) (BPBM). Cap Ndoua, site 1, rainforest, 22.38333°S 166.93333°E, 150 m, 28 Nov 2004, C. J. Burwell and G. B. Monteith, 1♂ (AMNH_PBI 00178063), 1♀ (AMNH_PBI 00178064) (QM); 21 Dec 2004, C. J. Burwell and G. B. Monteith, 1♀ (AMNH_PBI 00178065) (QM). Foret Nord, site 2, 22.31666°S 166.91666°E, 200 m, 02 Dec 2004, S. G. Wright, 1♀ (AMNH_PBI 00178066) (QM). Isle of Pines, Vao, 22.66888°S 167.489°E, 100 m, Jan 1985, N. L. H. Krauss, 1♂ (AMNH_PBI 00042596), 1♀ (AMNH_PBI 00042597) (BPBM). Kwe Binyi River, via Goro, 22.25801°S 167.0051°E, 16 m, 22 Apr 2005, Cassis, Wall, Tatarnic, Monteith, 2♂ (AMNH_PBI 00006243, AMNH_PBI 00006244), 2♀ (AMNH_PBI 00006245, AMNH_PBI 00006246) (AM). Les Bois du Sud campground, 22.17205°S 166.7604°E, 200 m, 23 Apr 2005–25 Apr 2005, Cassis, Wall, Tatarnic, Monteith, *Phyllanthus* sp. (Euphorbiaceae), 8♂ (AMNH_PBI 00006215–AMNH_PBI 00006222), 3♀ (AMNH_PBI 00006231–AMNH_PBI 00006233) (AM). *Phyllanthus* sp. (Euphorbiaceae), 8♂ (AMNH_PBI 00006223–AMNH_PBI 00006230), 6♀ (AMNH_PBI 00006234–AMNH_PBI 00006239) (AMNH). Mokoue to Dothio, 21.5667°S 166.1°E, 150 m, 20 Mar 1968–22 Mar 1968, J. L. Gressitt, 1♀ (AMNH_PBI 00042167) (BPBM). Monts des Koghis, 22.167°S 166.53°E, 550 m, 20 Sep 1979, W. C. Gagne, *Macaranga* sp. (Euphorbiaceae), 3♂ (AMNH_PBI 00042591–AMNH_PBI 00042593), 2♀ (AMNH_PBI 00042594, AMNH_PBI 00042595) (BPBM). Mount Koghi, 22.1775°S 166.50888°E, 400 m, 12 Nov 1986–14 Nov 1986, R. L. Brown, 1♂ (AMNH_PBI 00042154) (BPBM). Nouméa, 22.16°S 165.3°E, 5 m, 28 Feb 1960, J. L. Gressitt, 1♀ (AMNH_PBI 00042159) (BPBM). Nouméa, 22.16°S 165.3°E, 20 Feb 1963, C. M. Yoshimoto, 1♀ (AMNH_PBI 00042166) (BPBM). Refuge de Farino campground, 21.64869°S 165.7808°E, 269 m, 25 Apr 2005, Cassis, Wall, Tatarnic, Monteith, (Sapindaceae), 8♂ (AMNH_PBI 00006247–AMNH_PBI 00006254), 7♀ (AMNH_PBI 00006240–AMNH_PBI 00006242, AMNH_PBI 00006255–AMNH_PBI 00006258), 9 juveniles (AMNH_PBI 00006259–AMNH_PBI 00006267) (AM). Yahoué, 22.19583°S 166.49861°E, 100 m, Dec 1983, N. L. H. Krauss, 1♂ (AMNH_PBI 00042155) (BPBM). Yate, 22.16666°S 166.95°E, 26 Mar 1968–27 Mar 1968, J.L. Gressitt & T.C. Maa, 1♀ (AMNH_PBI 00012098) (AM). 1♀ (AMNH_PBI 00042598) (BPBM). **Province des Iles Loyauté:** Maré Island, La Roche, 21.48333°S 168.03333°E, Mar 1959, N. L. H. Krauss, 1♂ (AMNH_PBI 00042168) (BPBM).

Coridromius zetteli Chérot, Konstantinov and Yasunaga

Figures 5, 6, 17S–U, 21D, map 5

Coridromius zetteli Chérot et al., 2004: 58–60.

DIAGNOSIS: This species is recognized by the following combination of characters: bilobed proepisternum; embolium with yellow U-shaped fascia near cuneal fracture, lateral margins of hemelytra straight and carinate; male left paramere tightly corkscrewed with acute apex nearly parallel to axis. *C. zetteli* is similar to *sommelieri*, but can be distinguished by the slightly different shape of the left and right parameres and the much shorter ventral apical process on the pygophore. It is also very similar in appearance to *testaceous*; while *zetteli* is currently known only from males, *testaceous* is known only from females.

REDESCRIPTION: COLORATION (figs. 5, 6): Varying from light brown to almost uniform dark brown with yellow markings. Head: Light brownish yellow to orange-brown; frons typically yellow along midline, with very faint to distinct darker brown vittae; clypeus yellowed with darker brown markings at base, dark brown apically; mandibular plates yellowed; maxillary plates brownish orange; buccula yellowed; labrum dark brown basally; labium pale, brown apically. Antenna: AI dark brown, pale at base and apex; AII light orange-brown with dark brown subapical band, separated from dark brown apical annulation by narrow cream band; AIII and AIV dark brown, pale at base. Thorax: Pronotal collar yellow to orange-brown, darker anteriorly; pronotum light orange-brown to dark brown, with median yellow band (faint in some specimens), yellowed at humeral angles in paler specimens, lateral and posterior margins yellow; mesoscutum orange-brown to dark

brown; scutellum light orange-brown to dark brown with yellow midline, apex, and sides; thoracic pleura mostly orange-brown with posterior margins of each sclerite yellowed; mesopleuron dark brown ventrally. Hemelytra: Orange-brown to nearly uniform dark brown; in paler specimens clavus slightly paler at claval commissure and along posterior margin, immediately above cuneal fracture; embolium yellow along outer margin, with U-shaped yellow fascia at lateroapical margin; cuneus dark brown; membrane pale brown with dark brown veins. Legs: Pro- and mesofemur yellow at base, becoming orange-brown toward apex; metafemur pale basally, with 8 or 9 diagonal dark brown stripes, stripes merging with dark brown ventral patch in darker specimens, subapical lateral depressions dark brown. Abdomen: Orange-brown with alternating cream and dark brown markings along dorsolateral margin. SURFACE AND VESTITURE (figs. 5, 6): Head, pronotum, propleuron, metepimeron, scutellum, and hemelytra finely, shallowly punctate; head and dorsum clothed in long, silvery, decumbent setae. STRUCTURE (figs. 5, 6): Head: Frons broadly tumescent medially and depressed laterally; lateral tubercles adjacent to eyes small, bordered posteriorly by shallow depressions; posterior margin of head carinate and medially rounded. Thorax: Pronotum broad, lateral and posterior margins slightly carinate, anterolateral margins slightly turned upward, submarginal region of humeral angles excavated, callar region undifferentiated; proepisternum bilobed; posterior margin of metepimeron truncate; lateral lobes of metanotum prominent and flared; scutellum flattened. Hemelytra: Lateral margins of hemelytron straight and carinate; embolium with U-shaped fascia on lateroapical angle. Legs: Metatibial spines long and thick. Abdomen: Posterolateral margin of abdominal sternite II angular. MALE GENITALIA (figs. 17S–U, 21D): Right paramere broad, somewhat club-shaped, with thumblike lobe, appearing U-shaped when viewed from above (figs. 17Q–R, 21D); left paramere straight and tightly coiled five times along its axis, ending in a tapered point nearly parallel in direction to the paramere body (figs. 17S, 21A). FEMALE PARAGENITALIA: Unknown.

REMARKS: *C. zetteli* is known only from males. Since the corkscrewed left paramere of *zetteli* is nearly identical to that of *sommelieri*, we suspect that the female of *zetteli* should also have a comparable corkscrewed paragenital opening. As discussed above, *zetteli* is also very similar to *testaceous*, which is ironically known only from females. Both species were recently collected together in southern China by the senior author, raising the possibility that they may be conspecific. *C. testaceous*, however, lacks the corkscrewed paragenital opening we would expect if these were in fact the same species.

HOST: Recorded from *Macaranga* sp. (Euphorbiaceae) in southern China.

DISTRIBUTION: Known from southern China and Laos (map 5).

HOLOTYPE: Male: **LAO PEOPLE'S DEMOCRATIC REPUBLIC: Sekong Prov.:** Bolavens Plateau, N slope, ca. 10 km N. Mg Tha Theng, 15.5°N 106.43333°E, 500 m, 29 May 1996–30 May 1996, Schillhammer, (AMNH_PBI 00189975) (NHMW).

PARATYPES: **LAO PEOPLE'S DEMOCRATIC REPUBLIC: Sekong Prov.:** Bolavens Plateau, N slope, ca. 10 km N. Mg Tha Theng, 15.5°N 106.43333°E, 500 m, 29 May 1996–30 May 1996, Schillhammer, 3♂ (AMNH_PBI 00189974, AMNH_PBI 00189976–AMNH_PBI 00189977) (NHMW).

OTHER SPECIMENS EXAMINED: **CHINA: Yunnan Prov.:** Xishuangbanna Tropical Rainforest Ecosystem Station, ~3 km from entrance, 21.96777°N 101.2075°E, 650 m, 30 May 2006, N. Tatarnic, *Macaranga* sp. (Euphorbiaceae), 2♂ (AMNH_PBI 00006073, AMNH_PBI 00006074) (AMNH).

DISCUSSION

With this paper we increase the number of described species of *Coridromius* from 11 to 32 (33 if we include *schuhi*). With the exception of a few species, our conclusions are based on the examination of very few specimens collected from a limited number of localities. As a result, we suspect that the number of species of *Coridromius* must be greater than reported herein. For example, throughout Africa only three species of *Coridromius* are known from a total of six localities. In all likelihood there are many more species to be discovered in

Africa, once more sampling is undertaken in this relatively unexplored region. Similarly, while a relatively large number of species (five) have been described from Papua New Guinea, the specimens all result from a small number of collecting events, and again from relatively few localities. No doubt other known areas of high biodiversity, such as Borneo, Sulawesi, and other localities throughout the Old World tropics and subtropics, will ultimately yield more new species.

As the only mirid known to practice traumatic insemination, *Coridromius* arguably has the most unusual biology in this family. We believe that in order to fully understand the nature of this unusual form of mating, we must be able to confidently determine the phylogenetic placement of *Coridromius* within the Miridae, and also reevaluate the relationships of those other Cimicomorpha that practice traumatic insemination (i.e., the Prostemmatinae, Plokiophilidae, Anthocoridae, Polyctenidae, and Cimicidae). Unfortunately, it is this very form of mating that has canalized many of the morphological characters within *Coridromius* (and within those other traumatically inseminating taxa as well), making taxonomic placement difficult to assess with morphological characters alone. We hope this issue may be alleviated with the use of molecular components in addition to morphological data in future investigations into the systematic placement of these unusual bugs.

ACKNOWLEDGMENTS

We wish to thank Sue Lindsay (AM) for providing assistance with the scanning electron micrographs for most taxa, while Michael D. Schwartz kindly provided the scanning electron micrograph of *C. carinatus*. Hannah Finlay (AM) assisted with the dissection of female specimens and kindly provided her rough sketches to be used for further illustrations. Gareth Carter and Michael Elliot (AM) helped in the preparation of the distribution maps. Matthew Bulbert (AM) created the excellent photographs of *C. monotocopsis* on *Monotoca elliptica*, Tomohide Yasunaga (JICA) provided his beautiful image of *testaceous*, and Chris Darling (Royal Ontario Museum) also provided his photograph of *chinensis* on an unidentified *Macaranga* tree. Chris Darling and Qing-Jun Li (Xishuangbanna Tropical Botanical Garden) were instrumental in assisting with NT's fieldwork in southern China and Laos.

Geoff Monteith (Queensland Museum) was invaluable as guide, companion and collector during fieldwork in New Caledonia. Michael Wall (San Diego Natural History Museum), Celia Symonds (AM), Christiane Weirauch (University of California, Riverside), and Randall Schuh (AMNH) must also be thanked for their outstanding collecting efforts across Australia and New Caledonia.

We wish to thank all those who provided the material necessary to complete this project. A special thank you to Fréderic Chérot and Tomohide Yasunaga, who entrusted us with the only specimens of several important species. Likewise, this work would have been impossible were it not for the generous loan of all *Coridromius* specimens from the Bishop Museum, where most of the material is housed. Similarly, Mick Webb loaned us many specimens from the Natural History Museum, London, Randall Schuh provided us with a nearly infinite series of Australian specimens and Tom Henry from the NMNH loaned us the one and only specimen of *Coridromoides carinatus*.

We also thank Dieter Hochuli for his constant support, advice, and good humor. This manuscript was significantly improved with the reviews of Randall Schuh, Michael Schwartz, and Fréderic Chérot. Lastly, we are grateful to Katrina Menard, who read through this manuscript and provided invaluable editorial suggestions.

This research was conducted during the course of the senior author's Ph.D. research, which was funded by the NSF Planetary Biodiversity Inventories grant DEB-0316495 to R. T. Schuh and G. Cassis.

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